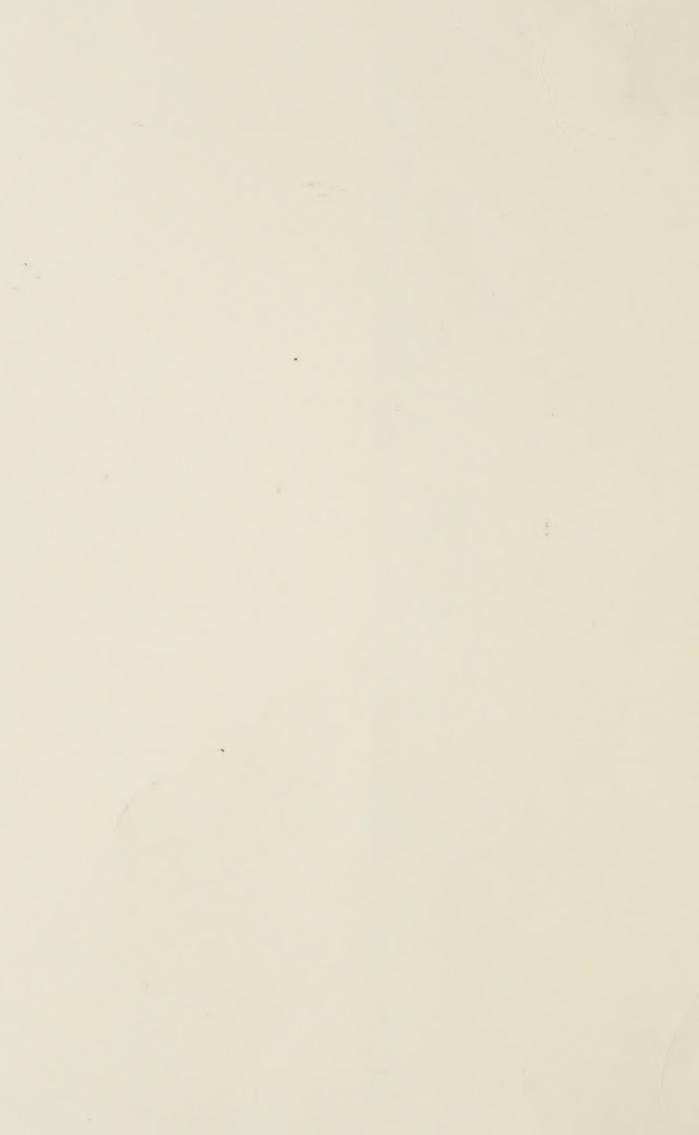
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SEPTEMBER, 1890.

ANOTHER summer is past, the crops have mostly been gathered in, and what remain can now easily be estimated. Last year was a very unfavorable one for soil tillers, as storms, and frosts, and droughts in some sections and drenching rains in others, and fungus diseases, and troublesome insects almost everywhere, made the gardeners and farmers' occupation a toilsome and care-weary one. Looking over the whole country the term comprised in the last six months has not been less prolific in similar evils, nor have these been less disastrous than last year, in some respects even more so. Late spring frosts ruined the fruit crops, excessive rains prevented planting until it was too late for many kinds of vegetables to do well. After this, drought, in many regions, has prevailed, and with this insects have multiplied, and in some places fungi have ruined the fruit that had escaped earlier destruction. have passed through two of the worst seasons ever known in the annals of American horticulture. This condition of things entails great hardships and sufferings to many, and some are almost or quite disheartened. But it will not do to fold the hands and sit down. Let us hope the worst is past and that the future may bring to us a recompense for our toil. The vegetable gardener must even now be making some preparation for his

spring crops; the fruit grower has work now to perform in anticipation of the coming season. The motto, "Instant in season and out of season," is as appropriate to apply to the care necessary for garden growth as to that for soul growth. The past is behind us, and the misfortunes of the two years past must be forgotten as we remember the rewards of numberless seasons before. The amateur gardener as well as the professional one has had his skill and patience tried by the extremes of weather, but to the former the loss is not a material one; though a loss of pleasure, it is not a hardship. The lawn will brighten up with the coming of the "latter rains," the hardy plants of the flower garden will be ready at springtime to show their beauty, and the trees their verdure. Newly made lawns of last spring have suffered from the great heat and drought of the past summer, and are more or less patchy; seed sown on the weak spots now would come up and make a fair growth before heavy freezing sets in, and the lawns would then be ready to make a good start in the spring. New lawns can now be seeded, and the earlier in the month the better.

The flower garden, through the present month, should still look bright, if due attention has been given to furnish it with late blooming plants. It is now a

good time to be looking forward to another season, and to sow the seeds of such plants as will be the better and stronger if the seeds are sown now. Some of these kinds will soon germinate and make plants ready to start early in spring and some will wait until spring to grow and then start early. The following are some of the most important kinds: sweet alyssum, snapdragon, columbine, canterbury bell, candytuft, centaurea, clarkia, collinsia, chinese pinks, foxglove, hollyhock, larkspur, lupine, lychnis, mignonette, forget-me-not, nemophila, nigella, pansy, oriental poppy, portulaca, scabious, sweet peas, sweet william and sweet rocket.

Young plants of perennials still in the seed bed can now be transplanted to permanent positions, and older plants that require it can be lifted and divided and replanted. By the latter part of the month general planting can be made of hyacinths, tulips, crocus, narcissus and other hardy bulbs; these should be put in early enough in cold climates to allow them to get well rooted before heavy freezing comes on, if the best result are expected -- at the South they may be planted later. In this locality the latter part of October is quite as late as their planting should ever be delayed, but early planting is best. Bulbs for house culture in pots can be put in at different times for coming into bloom at different sea-Roman hyacinths and paper white narcissus should be potted at the earliest opportunity. For beautiful, fragrant flowers in early winter the freesias must not be forgotten. Half a dozen

bulbs can occupy a four or five-inch pot, and if put in by the middle of September they can be brought into bloom for the holidays. Loam, leaf-mold, well decayed manure and a little sand make a suitable soil for them. Keep them in a rather low temperature and in full light.

Lifting and potting house plants that have been turned out will now be in order. The calla, or Richardia Africana, that universal favorite, should now be given some new rich soil and be started into growth. Many kinds of house plants that have been half dormant during summer will now require repotting and more care.

In the vegetable garden the later crops will still require care. Spinach seed should be sown for spring use. Asparagus beds can be prepared and the roots set the latter part of the month or in October. Old rhubarb plants that have grown into large clumps and have exhausted the soil about them, so that the leaf-stems are small, can be lifted and divided and reset in fresh, rich ground, where they will make a strong growth in the spring. The scarcity of fruit will make a great demand for rhubarb next spring.

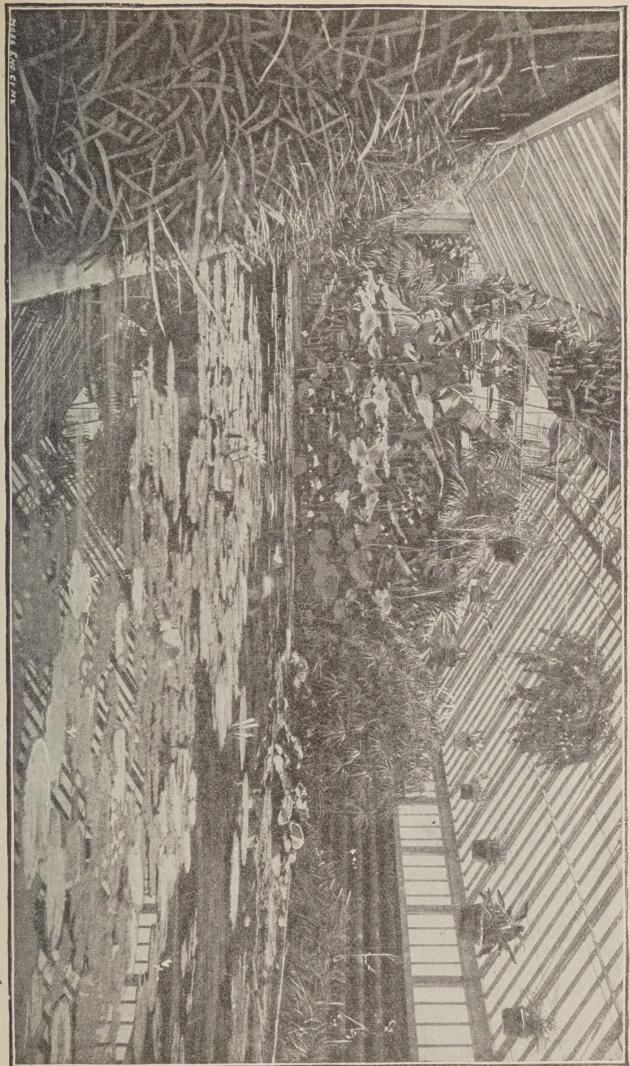
This is the season for making new plantations of strawberries and it should be done early to be quite successful. The ground should be well dug and maderich, and the plants set early enough to get well rooted this fall, then, when heavy frosts come, give a covering of litter. Cuttings of currants and gooseberries set this month will callous and root, and be ready to start in the spring.

WATER LILIES.

The water lilies of our ponds and bays and streams are the objects of unceasing admiration by the thousands of summer visitors at the water resorts. What more beautiful, what object more typical of purity than these great white lilies with hearts of gold set in clear cool water? If plants and trees and flowers call out the heart of the worshipper, as they have from time immemorial, what more worthy of our sincere adoration than pure water lilies without stain or spot or blemish; even though winds may blow and storms agitate the waves,

yet always floating at the surface these beautiful forms remain steadfast, glowing with purity, like immortal truth.

Long before this continent was discovered the water lily was a sacred plant with the inhabitants of India and Egypt, where it is still held in the highest esteem and affection. The eastern forms of Nymphæa are comprised in several species of different colors. Our own, N. tuberosa, takes on a pink or rosy tint in a few native localities. Most of our readers know how easily N. tuberosa can be raised and bloomed in an ar-



tificial pond or a tank or tub of water. The cultivation of the foreign species is made a feature of some floral establishments, and the engraving on the preceding page shows the interior of the aquatic house in connection with the range of orchid and rose houses at the garden of W. S. KIMBALL, of this city. This house, which is about twenty by fifty feet, is furnished with a cement tank of an average depth of about two feet, but somewhat deeper at the center than the sides. In this tank are growing and blooming numerous plants of Water Lily, the principal ones being the beautiful white N. dentata and the rosy pink colored ones N. rubra and N. Devoniana, whose flowers are from six to eight inches in diam-These are all night bloomers, opening in the evening and closing about ten o'clock the next morning. Nymphæa cœrulea stellata also has a place; this has a smaller flower with a slight bluish tinge. These species bloom in the summer and rest during winter. The central portion of the tank is occupied by the

magnificent N. Zanzibarensis rosea, and N. Zanzibarensis azurea, strong growing plants with very large flowers and which bloom in the day time and at all seasons of the year. One end of the tank is partitioned off for Nelumbium speciosum, whose strong roots if allowed to run would take possession of the whole tank This magnificent plant bears room. white flowers from eight to ten inches in diameter, which fill the air with fragrance. In one end of the tank also grow some plants of Papyrus antiquorum, supposed to be the plant employed by the ancients in the manufacture of papyrus. Some palms at the ends of the house supply green backgrounds, and blooming plants of Bougainvillea glabra and Allamandas, and the Fringed Hibiscus, and Aristolochia elegans furnish the walls with foliage and flowers. The house is supplied with hot water by means of pipes in connection with a boiler to afford the necessary heat in the cooler season of the year, but in summer the sun heat is sufficient.

AMARYLLIS JOHNSONII.

This plant, which has now been long in cultivation, still remains a favorite house plant on account of its ease of culture, handsome foliage and beauty of flowers. Like many other kinds of Amaryllis this species has its seasons of growth and rest very strongly marked. From the time growth commences it steadily advances until the blooming period is past, and then after a few weeks its foliage ripens off and its rest is apparently one of perfect repose for the bulb. This is its natural course, and all intelligent cultivation of the plant must be in accordance with these characteristic features. After the bulb has rested for a time in the pot in which it has bloomed it will begin to show signs of growth. At this time it should be taken in hand and turned out of the pot, the ball of soil about the bulb reduced and then be repotted in a pot of medium size; a good rule is to take a pot twice the diameter of the bulb, this will afford soil enough for the roots to occupy, and any more is a damage rather than a benefit, as it is apt to become sodden and sour, as gardeners say. In placing the bulb in the pot

set it so that its top will be about even with the rim, but do not cover it entirely —the upper third of the bulb should be above the surface of the soil. Sandy loam with a mixture of good rotten manure forms the most suitable soil. A light watering only is needed after potting, and then place the pot in a temperature of about 65°. Be careful for a short time about overwatering, but after the roots have commenced to run water can be supplied more freely. Give the plant a place where it will have a good light and plenty of sunshine; this is necessary for a strong healthy growth. A moist atmosphere is especially needed for this plant, and this should be carefully maintained. When young bulbs are first procured in the trade they sometimes make their growth without blooming. When this is so there is nothing to fear, the bloom will come in time. When the bottom leaves begin to turn yellow reduce gradually the water until it is nearly or wholly stopped, and after about three months of rest the bulb will be ready to start again, and should have the same treatment.

IN THE "NORTH WOODS."



One is surprised to find such wonderful luxuriance of vegetation as fills the "North Woods," as that portion of Wisconsin is called which abuts on Michigan. It is so far north that you get the idea, before going there, that there must be little else than the "forest primeval." You are prepared to find some varieties of ferns, and wild briars, but you do not expect to see many flowers. In this you will be sure to find yourself greatly mistaken. An "outing "of two weeks, the past season, among the pines, birches, maples, balsams and hemlocks of this region, but little known to anyone except the land-hunter and the hunter of deer, afforded me a great deal of pleasure, and opened my eyes to the fact that the flora of the northern part of our state is surprisingly rich in variety.

Along some of the wild and rocky streams which cross the country in every direction, I found great quantities of clematis growing more

luxuriantly than any I ever saw before. Often I came upon a fallen pine whose entire top was completely covered with the vine, and it was nothing unusual to see the banks white with its feathery blossoms for rods and rods on both sides of the stream. The sight was a beautiful one. This plant is only found along the streams. I never saw it growing fifty feet away from the water.

Often I came upon places where the rocks were piled up twenty, thirty, forty or fifty feet above the bank, and these were covered with a network of ampelopsis so luxuriant that only here and there the gray boulders could be seen peeping through. Here and there a scraggy birch or a stunted balsam would thrust itself out from some crevice in the rocks, to be taken possession of by the rampant vines which hung their green festoons from every branch. The effect must be superb in autumn, when the leaves take on their gorgeous coloring, seen against an upper background of yellow maples and somber evergreens.

More magnificent ferns I never saw. The hollows were filled with them, and they were so tall that the fronds closed above my head when I parted them to make myself a pathway among them. They grow in perpetual shade, in most places, and the air about them is always moist. You will come upon ridges where the maidenhair grows in glorious masses, its fronds supported on stalks almost two feet high. Imagine a wind blowing through them, every frond waving in its slow, graceful way, with the whisper of the pines overhead, and somewhere below you, and out of sight, the ripple of a brook or the roar of the river. Such a nook is the place of all places to dream in. If one cannot write poems there, there is no poetry in him.

The rocks along the river are often almost covered with a moss so thick and deep that it seems to the foot like the pile of a velvet carpet. It is more like a miniature fern in appearance than like ordinary moss. A sort of climbing fern takes possession of the base and sides and runs riot among the moss. If one could have one of these huge boulders in his yard at home, with the moss and ferns growing on them as they grow here in the woods, he would have an ornament to be proud of. But there's the "if" in the way. You can have such luxuries nowhere else than among these great torests.

In low and swampy places, the moccasin flower lifts its white-and-pink and yellow blossoms in the greatest profusion. The trailing cranberry grows beside them. On the bluffs blackberries and raspberries flourish, and in some places I found a va-

riety of aster of a more decided blue than any I ever saw elsewhere. But I saw not one wild rose, though I sought far and wide for this most lovely flower. Dogwoods and alders flourish along the creeks, and wild strawberries grow in open places. Wintergreen and Prince's pine stand so thick in many places that the ground is a solid mass of shining leaves. Ground pines and Mitchella repens "spread themselves" on all sides in a perfect abandon of luxuriance. Adder-tongue and hepatica peer up among the last year's leaves, and trillium and Jacob's ladder greet you R. F. D. on every hand.

CLOTH OF GOLD.

light and richness, and often in various places seems like reflected sunshine. The maple tree which stands opposite our sitting-room windows, each time when turned in full autumn coloring appears to radiate light into the room, and the park near by filled with these trees illuminates the surrounding landscape, on a cloudy October day, in such a manner as to rival the sunshine. At this season yellow is the most prominent color on trees, shrubs and flowers, lighting all in a sunny glow, which the glory of the departing summer leaves behind. And it also appears in our early spring flowers in prophesy of the bright things yet to come. Nature uses it profusely at all seasons in various ways, on the foliage of plants, where it is not all of this color. The leaves are colored with a network similar to the Japanese honeysuckle, or variegated with spots or lines, while there are tufts, discs, streaks, dots or pencilings on the different flowers with whose color it harmonizes, and is also common for the many stamens where the bee collects his golden store. It is growing in popular favor, as many shrubs are introduced entirely of this hue, and as if to prove what an important factor the sun is in their composition, they will fail to display their brightest tints unless placed where they can have its full rays. The florist has given the name Cloth of Gold to many plants. The rose bearing this title belongs to the perpetual blooming class. This divides the honor with a crocus, and a geranium with golden foliage, and many similar ones are found among the chrysanthemums, such as Golden Star, Golden Quill, Golden Feather, chrysanthemum itself meaning literally golden flower, while many others merit the appellation. Examine the buttercup; does it not seem like wrought

Golden yellow is a royal color, full of gold from the alchemy of nature's laboratory, made of the dew and sunshine which it reflects in its "tiny polished urn" to such a degree as to shadow its glory on the face to which the children playfully hold it to note the effect, and to lengthen their enjoyment of this flower? Two species of it are particularly conspicous, the bulbous crowfoot, which blooms in early spring, and the tall crowfoot, which blooms in summer but is not either as large or bright. The raunculus found in the gardens of olden times is a buttercup, and the marsh marigold is closely related to these and grows on low, wet land, and with its starry flowers clustered among the dark green leaves makes beautiful bouquets arranged in shallow dishes of wet sand, and coming as they do before we have had a sight of any but the scarlet flowers, have always been admired when utilized in this way. St. Johnswort has many species, varying from the great St. Johnswort to the pine with its needle-like foliage interspersed with tiny blooms, bordering the roadsides. The toadflax has showy racemes of yellow flowers, the lower lip having a dark streak of orange, and although a troublesome plant on account of its tendency to spread far and wide, is a pretty bit of coloring for a nature lover to admire, scattered along the highway in the country. When some fine May morning we notice the greensward plentifully sprinkled with dandelions, "an Eldorado in the grass," we are reminded "How like a prodigal doth nature seem, when thou with all thy gold so common art." This brilliant color is found also in our gardens, among the roses and lilies. The single rose of deep yellow, blooming the first of June, has been welcomed for years, as it comes in advance of other sorts. The crocus, which some authors say derives its name from the Greek

word signifying thread, because their thread or filament was in such demand for saffron dye. The daffodils, with many other species of the narcissus family, are radiant in the borders early in the season. The marigold is also entitled to a place here, as it produces large globes of golden flowers, those with ruffled petals being especially noticeable. Sunflowers should be in every garden: there are varieties enough to suit all tastes, and they give such a wealth of color, properly dispersed. Plant some of the tall ones in some out-of-the-way corner and when you come upon them unexpectedly they will be a surprise, standing there in their magnificence, turning their faces toward the sun as if in adoration. Helianthus multiflorus plenus deserves to be widely cultivated on account of its many good qualities. It is hardy, although any plants do better and grow stronger for a little protection through the winter, and in a few years the roots will increase and many plants may be had by division of the tubers. They will bloom sparingly the first summer, but from that time will bloom in profusion in their season, which is in August and September, or until frost comes. The plants grow four feet in height, rather bushy, and when covered with their golden yellow flowers make a gorgeous appearance. These are desir-

able for cutting, as they will keep bright and fresh some days. Now that there has been introduced a yellow larkspur and some progress has been made towards producing a yellow aster, it seems as if this color was recognized in nearly every family of flowers. And so, summing up the whole, this color is valuable to our gardens, making all look bright for its presence, and there is nothing better for lightening up dark masses of shrubbery. It can be used to advantage in extensive floral decorations, as it always combines well with green, and is very effective for smaller designs and for arranging with cut flowers if placed in harmony with other colors. It may be had in abundance, as it is found in the earliest spring flowers and among those which are the last to leave in the autumn. with the goldenrod which gives so much brightness and cheer to the Indian summer days. We never look at a large pasture lot covered with this plant in bloom, with the sun shining full upon it, without thinking that the "Field of the Cloth of Gold " would be an appropriate name, and it seems like concentrated sunshine.

"Along the roadside like the flowers of gold, That tawny Incas for their gardens wrought, Heavy with sunshine droops the goldenrod."

EVALYN.

AN IDEAL HOME GARDEN.

There are flower-gardens of many types. All of us have seen specimens of the slovenly type, where the yard was a confused jumble of uncommon grass, unpruned shrubs and riotous flowers, no telling where a bed ended or began, and in their uncongenial surroundings the flowers losing half their beautiful loveliness. We all of us have seen, too, especially in ambitious town gardening, an elaborate system of serpentine walks, beds, cut in fanciful stars, crescents and intricate geometrical designs, everything as formal and exact as though laid out by a compass and square. The beds showing contrasting masses of color, wrought out in carpet-like patterns, and to bring out the design more clearly, every branch or flower that breaks the formal boundary lines is mercilessly clipped, that nothing may obscure the outlines. The hap-hazard style and the carpet-bedding style may be taken as the two extremes of gardening. Without professing admiration for the former, I have decided objections to the latter. There must be something depraved in the taste that would sacrifice all natural grace and the charm peculiar to each flower, simply to show glaring patches of color, or to show what ingenious crooks and turns can be made without confusing one line of colors with another. Away with this stiff, unnatural, unartistic arrangement! the two evils give me the tangled flower garden, over-grown by June roses, bouncing bets and morning glories, rather than the clipped rings and loops of coleus and achyranthus.

Walks and lawns and well defined beds add much to the appearance of any pleasure ground, but I am against this

senseless plan of giving up everything in the flower line, and confining one's self entirely to a few massed beds of fashionable bedding plants, as is now too often the custom. It would be just as sensible to plant only a bed of perennials, or of bulbous plants, and to depend upon them alone for flowers, as to plant only geraniums and coleus, as hundreds do, just because it is the fashion. My ideal flowergarden is one where there is something in bloom from the time of the first snowdrop of spring to the chrysanthemums and pansies of latest autumn. The chief charm of the garden lies in the ever changing panorama of leaf and bud, the seeing one day of the first bloom of some new flower, the beholding to-morrow of some old-fashioned flower, dear from the days of childhood. Diversity interests and attracts but monotony wearies and repels.

In planning one's premises, unless the grounds are of unusual extent, it is best to arrange the beds near the walks or drives, so as to leave as wide an expanse as possible of the unbroken lawn. The smooth green of the lawn is to the flower garden what the frame is to the picture, and it can scarcely be too well kept. A little calculation will show how many beds can be made, and where placed to the best advantage; along that side fence a rose hedge can be planted, or a long border left for perennials; here a vine can be trained, there a group of shrubs planted. This settled, there comes up the question, with what shall the beds be filled? The ideal gardener will not cultivate one class of flowers to the exclusion of all others. He will have a few beds of annuals, the very cream of the many sorts; he will have geraniums, coleus and other bedding plants, but not too many of them; he will have a long border devoted to the many beautiful

herbaceous perennials; he will have a few beds of the tall-growing cannas and other large-leaved foliage plants that with their luxuriant growth give a tropical appearance to the most ordinary yard; he will plant groups of the choicest shrubs; he will have sunny beds filled with fragrant roses; he will make ample provision for the beautiful class of bulbous plants, the hyacinths and tulips of spring, the lilies, gladioli and tuberoses of summer and fall, and over each trellis, pillar and porch he will drape graceful vines.

Nor need such a variety require more room for beds than any good sized yard will give. Vines trained around piazzas and pillars take up almost no room; the crocus and snow-drop dotted here and there on the lawn bloom almost before the snow is gone, and their tops die down before the grass is ready to cut; so, also, do the early-blooming tulips, hyacinths and scillas die down in good season for their beds to be used for annuals or bedding plants. Often tall foliage plants can be used for the center of large beds with good effect, or other beds edged with neat small-growing plants as borders; shrubbery to do well requires rich soil, free from grass and weeds, and shrubbery beds are none the worse, but rather the better, for the cultivation of summer bulbs or perennials among them. A little planning goes a great ways in things of this kind.

I know full well that all cannot have the variety here spoken of, but there are thousands of homes where all these might be easily grown. Such a garden gives room for one's own ideas to be carried out, and there is little danger of its being a counterpart of a dozen or twenty other gardens in the same town, as is the case where bedding plants alone are used.

MRS. LORA S. LA MANCE.

THE ENGLISH DAISY.

Is it not strange that the English daisy, "beloved of the poets," and so universally grown in its native land, should in this flower worshipping country not receive half the attention lavished upon plants without a tithe of its merits? Surely it cannot be for lack of beauty, as a bed of daisies in full bloom is a "vision"

of loveliness." Neither can it be from any difficulty attending its culture, since it is one of those unassuming flowers whose wants are very few and easily gratified. As it possesses all the qualities which render a plant desirable, save only the charm of fragrance, there is every reason to believe that this flower, which

has been known from "time immemorial," and immortalized in prose and verse, which flourishes alike in garden and dwelling house, and although luxuriating in a cool, moist air, is able to defy the torrid atmosphere of the average living room, is, as yet, in America, "a stranger in a strange land." I have, all my life, been interested in flowers, and from childhood days quick to see any member of that coveted race, whether in field, wood or garden, no matter how carefully hidden away from ordinary vision that flower might be. But I do not know that my practiced eve has ever yet been gratified by resting on the English daisy in more than a halfdozen places during the whole course of my more than forty years of existence. Indeed, I think that, saving the places where I furnished the individuals either with plants or seed, I might divide the half-dozen by two and then not be very wide of the mark. Perhaps I have been singularly unfortunate in respect to the matter of finding English daisies in the gardens of those who love and cultivate flowers, and it is to be hoped for sake of such people that I have, since the number of flowers more worthy of attention than this exquisite floral gem is limited. Possibly the fact that the daisy does not without due protection always survive our trying winters, when grown in the garden, may have something to do with its want of popularity on this side of the This, however, is no excuse for those who have time and patience to cultivate annuals, since daisy seeds germinate very quickly, producing in a short time stocky plants which will soon repay all the care they get in a most generous manner, and continue to send up their beautiful blossoms long after many, if not most, of the annuals have succumbed to the frost king's blighting touch. Whether the few who grow the English daisy in their gardens are aware of its possibilities as a house plant, is a matter of doubt, since one rarely sees a daisy in the windows which are crowded with geraniums, fuchsias, begonias and the numerous other favorites so dear to every flowerloving heart. Whether generally known or not, the fact remains, that this dainty flower is one of the best of all plants for window culture, producing its pretty

blossoms in great profusion for months in succession. It is well adapted to those rooms which have a temperature of from 40 to 60 degrees, and will endure a heavy frost, although, of course, with disastrous results, as it takes quite a time to recover from the effect of such rough usage. Many people have chambers heated only by a pipe passing through them, which, while it modifies the intense cold, does not render the apartments warm enough for the average house plant, such as the geranium, etc. To such individuals, if fond of house plants, the English daisy would prove a veritable treasure, since a very slight degree of heat enables it to produce its blossoms, which long remain perfect in a cool atmosphere. A box measuring about six by thirty-five inches. and perhaps four or five inches in depth, containing daisy plants, was kept winter before last in a room heated by a pipe passing through a small wheel register over a coal stove in the room below. Just after Easter I counted, if my memory is not treacherous, on the plants in this box about eighty buds and flowers. same box filled with daisies last fall and kept in a warmer atmosphere was by the middle of December in full bloom, and investigation again revealed, oddly enough, the same number of flowers-eighty.

A pot of daisies in which the earth froze hard last winter, on being transferred to a hot room, put forth a quantity of flowers, showing that while the daisy apparently has "all seasons for its own," it also seemingly has all temperatures. One excellent quality which it possesses should not be overlooked in giving a list of its virtues to the world, and this is its independence of the sunlight so necessary to most plants. It will flower freely without a ray of sunshine, although, of course, it cannot develop the color of the crimson flowered variety so finely as when under the direct influence of that most skillful florist, Old Sol. The lasting qualities of the daisy blossom and its long and graceful stem render it one of the best of all flowers for cutting—a fact which will commend it to those who wish to contribute out of the abundance of their floral treasures to those of their friends less fortunate than themselves.

There is little doubt that when the numerous good qualities of this exquisite

and dainty little flower are as well understood in America as in its "own native land," it will be valued at its true worth and not only appreciated but universally grown, as in the "mother country." A place slightly sheltered from the direct rays of a summer sun is no doubt better adapted to the nature of the daisy than a more exposed location, but it will, I think, grow in almost any reasonable situation—to coin a term—though of course with results according to the place in which it is grown, a slightly damp

soil producing better flowers, etc. Certainly no one need plead the expense as an excuse for not cultivating the daisy, for a packet of seed will produce enough to stock a whole town with the sturdy little plants, which seem almost to leap from the soil as soon as the seeds are sown, and which need little more care than weeds to make them flourish, and one could hardly say much more than this in praise of their ability to take care of themselves.

E. L., Hoosac, N. Y.

ABOUT GREENHOUSES.

The writer is often asked about the construction of small greenhouses, and as the interest in them seems to be increasing, he thinks best to give his opinion regarding them in this paper, hoping that it will answer as a reply to many inquiries, thus saving the trouble of writing to each person who contemplates building and is in search of information.

Where practicable, I would always build a span-roof, because it gets both morning and afternoon sun, if running north and south. If I were obliged to run it east and west I would have a threequarter span if detached from the dwelling; if connected, a lean-to. A threequarter span gives plenty of sunshine for all plants on the south side, and can be arranged so as to furnish shade for ferns and other plants not fond of strong sunshine, by giving them a place on the north, and training vines in such a manner as to break the rays of the sun. In a lean-to with a southern exposure the sun, especially at noon, will be too strong for anything except such plants as are fond of sun-heat. I consider a lean-to more difficult to regulate than any other form.

In a small greenhouse running north and south, I would have the side walls not more than five feet high from sill, without glass. The south end, with the exception of two or three feet above the sill, I would have all glass. Plants will get plenty of light from the roof in houses having five foot walls without glass. I would have all the glass necessary to furnish plenty of light, but not a foot more, because so much heat is lost in radiation.

I would have the roof about one-third pitch. This will give you about ten or ten and a half feet in the center in a house sixteen feet wide, with five foot walls, and you will require this height if you keep oleanders and other tall-growing plants.

I would have ventilators running the entire length of the roof, reaching down about four feet from the ridge, to which they should be hung.

I would use, for opening them, the apparatus patented by a New York firm, which consists of a rod running the length of the house, with arms which are fastened to the lower part of the ventilating sash. At one end is a rod with screw fitting into the end of the long rod. This has a crank at the lower end, and by turning it the rod to which the arms are attached is rotated, and the sashes are lifted alike, and together, and are held rigidly in any position until the crank is turned. With this apparatus labor and time are saved, and injury to sash and glass by sudden winds which often do much damage where the oldfashioned lifting-bars are used is avoided.

I would have no "beds" in a small house, but keep all plants in pots. I would have side benches two feet and a half wide. There should be a space of six inches back of them, next the wall, to allow drip from the glass to run down without falling on the plants, and to admit the passage of a free upward current of warm air. In the center I would have a table six feet from the floor. This gives you a fine chance to arrange plants effectively, on the "banking" plan, and to

place them on the upper shelf near enough to the glass to get all possible benefit.

I would have the floor made of strips three inches wide, with a half-inch space between them. This will allow the water to run off readily, and will be found much neater than any other floor except tile.

I would use hot-water heat, by all means, in a small building like this. Steam may be as good as hot water for heating greenhouses, but in a small house it is not as easily regulated.

I would have a room on the north, or quarter of an inch.

somewhere close at hand, in which to store pots, etc.

I would not use glass on roof smaller than 12x20, double thick, and this should be laid on cypress sash bars, tacked down, and then run along the edge with putty and white lead mixed the consistency of cream and applied with a putty bulb. Into this, when first applied, I would sift fine sand. The sand and putty form a cement which will last for years. I would lap the glass not more than one-quarter of an inch.

A FINE OLD LILY.



Lilium candidum, a pure white variety and very fragrant, is a fine old sort for garden culture. Indeed, no other sort thrives so well in various soils and under almost all conditions. Its extreme hardiness is a characteristic notably in its favor. There are conditions which must be met, however, before its fullest success can be insured. Old grown beds that have stood for some years must be reset every five or six years, and would do better still if reset in three. New beds must be

planted in August, for if later than this they will not furnish bloom the following summer. The bulbs should be set some six inches apart in a bed somewhat raised, so as to insure good drainage, for places where the water is apt to stand will not do for the lilies. As for the rest, the soil may be sandy, clay or loose loam—my own garden is stiff clay, and I have grown them successfully for as many years as I can remember, almost, although I have signally failed with many other sorts more rare and far less easy of cultivation. A friend has loose bottom soil, and is even more successful, raising such quantities as to be the wonder of all who see them. But the bed must be raised from the level.

The green tops appear in September, closely following upon the planting in August, and remain green all winter, not injured in the hardest freezing. The flower stems begin to appear in late spring, grow to from three to four feet high, and the flowers themselves show between the 10th and 20th of June in this locality. They are pure spotless white, very sweet scented, and upon each stem from four to eight, or ten in number are borne. Of hardy, robust habit, the bulbs, especially if home grown, are sure to do well, and the kind is quite val-

uable for forcing. The flowers when cut bring the very essence of sweetness into the house, and will last for days. A bed of these or a border of them, will make the garden wonderfully beautiful in rare June days.

H. K.



A BEGINNER IN FRUIT-GROWING.

NUMBER 10.

When this reaches the reader's eye all the berries will have been gathered, and the boxes laid away to await the harvest of another year. Whatever the style of package used nearly all the crates and many of the boxes will do to use again if properly stored. The greatest enemy of the "give away" or Hallock boxes when not in use is the mouse. When the boxes are packed in crates and the crates piled up in some quiet loft, a veritable palace with innumerable rooms is formed of which the mice are not backward about taking possession. If there is not room in the bottoms for easy egress, a door is easily cut, and sometimes many boxes will have ugly holes cut in the bottoms, while some will be filled with nests of feathers, thistle down, rags, lint or grass. Many will bear evidence of their tenants in other ways, and altogether the boxes will be hardly fit to use if mice have access to them. The only way to avoid loss is to store in some mouse-proof chamber, corn crib or granary.

In the absence of such a place, a box may be constructed in some attic, using heavy hemlock flooring for the purpose. The Hallock half bushel crate occupies about six-sevenths of a cube foot, and a box forty-two by sixty inches and thirty-six inches deep will store forty such crates.

I sort the boxes before putting away, putting whole ones in the best crates, and such as will bear repairing in similar crates to be overhauled in the rainy days of May. These old boxes are not used until the season is advanced, and sometimes not until raspberries are picked, new ones being provided for the first ripe strawberries.

I am using some of the baskets that nest together, for the first time, this year, and when the blackberries are done I shall put four packages of twenty-five each together, wrap them in paper and swing them with wires to nails driven in the barn rafters. Wrapping them up in this way will protect them from flies, bugs, dust and cobwebs.

The bushel crates with the division slats will be stored in an attic loft. I like this style of package better than the Hallock for several reasons, and shall grad-276

ually cease to use the latter. The Hallock boxes lack ventilation, and being the same size at the bottom do not carry the fruit so well, nor does fruit show off so well in them.

There is much in the way of preparation that can be done for another year in the autumn months. Fence rows and headlands can be cleared up, perennial weeds eradicated from blackberries and raspberries, and ground cleared for next year's planting.

I shall try planting red raspberries and blackberries in October, protecting each hill with a forkfull of manure as soon as the ground is frozen enough to drive upon. The raspberries I will plant in check rows, and put three plants in a hill to insure a perfect stand. The matter of having a full row with no vacancies I have twice before alluded to, and now do so again, as no large or extra large yield can be obtained if there are missing hills. An acquaintance, who is a large berry producer, is realizing this to his cost this year. The wet weather delayed him in the spring, and also delayed parties of whom he bought plants, and finally when he did plant in poorly prepared ground, many plants failed to grow. His strawberries have twenty-five per cent. of vacancies, and his blackberries have come to the extent of only thirty per cent., leaving seventy per cent. of the ground unoccupied, to hoe and cultivate not only a year, but for several years to come unless he plows it up or fills the vacancies next season. The blackberry failure is not entirely his fault, but the result of a swindle. He sent to a widely advertised firm for Erie plants. Late in the season he received a box containing pieces of roots about five inches long, with a letter stating inability to furnish plants, but taking the liberty to "substitute root cuttings, which would do just as well." Such a swindle should be punished by recourse to law and wide exposure, but in this case the amount is not large and the swindled party not given to litigation, so he will quietly submit, and I suppose the firm will repeat their methods another vear.

The high price of berries in Northern Ohio, and I presume in other sections,

will cause the planting of a large acreage in raspberries and blackberries next year, and it will be well for those who have healthy, vigorous plantations to make an effort to grow a large supply of plants, and the dryer and more unpromising the season and the more difficult it is to accomplish this the more likely the grower will be to have a good market next year for both fruit and plants.

Speaking of high prices reminds me that this is one of the years when the persevering berry grower gets his reward. I was enabled to sell raspberries at twelve cents per quart and upwards, and blackberries are bringing \$4.75 per bushel, with a large crop in prospect. My raspberries only yielded sixteen bushels per acre, but they netted \$60, which is good enough considering that some of them had borne five previous crops. An acquaintance has an acre of Gregg raspberries in a peach orchard,

that had produced four crops. It had become quite grassy, and last spring he gave it a thorough cleaning out, taking out the grass between the plants with a mattock. It bore a wonderful crop, and the first week's picking netted \$90.

In growing berries a gardener must have staying qualities, and it is the one who follows it up, year after year, who makes the money. Just as I close this article a letter is handed me from a large fruit grower in north-western Ohio. He says blackberries are a failure, and that he has not had a full crop in twelve years. The canes are rank and growing twelve feet high, but do not fruit, and he is going to try a little wholesome neglect. My own experience is that blackberries thrive the best on moderately poor land, and gradually bring it to a condition of great fertility, besides making it loose and pliable.

L. B. PIERCE, Summit Co., Ohio.

NORTHERN SEEDS FOR SOUTHERN GARDENS.

Southern farmers and gardeners are apt to be prejudiced against northern grown seeds for southern planting, because of their supposed unadaptability to soil and climate, and, indeed, there are some kinds of vegetables which need several years of acclimation before they are well up to the average southern vegetable. Witness the first two or three years of failure and disappointment for the smart Yankee farmers who come down among us. But it is better to begin at the bottom of the ladder and climb up than steadily to retrograde, and we, southerners, when our own seeds have seemed to run out, from careless or improper cultivation, are learning to find that northern grown ones make excellent recruits.

Cabbages and sugar corn need several years of growing before they will fit in for our seasons. Our early, hot June weather brings them along too rapidly and they are dwarfed into very small heads and ears the first season, but in a year or two they learn better and their luxuriance and productiveness is something wonderful.

By selecting cabbage seed marked as very late, from the northern growers' lists, we get a very fair crop the first year,

and it may be so with many other kinds of vegetables which we have too hastily repudiated as being "too fast, like the Yankees," because our own headlong rush for early vegetables led us astray into choosing the earliest varieties from their lists.

Take, for example, Perry's hybrid sugar corn. The first year of planting, here in North Carolina, it was ready for use the last two weeks in June, but such tiny little bits of well filled ears, and the corn tassels, some of them, were not up to my shoulder. The ears were set not more than a foot from the ground, and those that were left for seed were ripe enough to gather before our other sugar corn came on for table use. But the little stalks produced, in most cases, three and sometimes four ears, which were very tender, juicy and sweet, so that we gave it trial again. The next year it did much better, and the third was so good, with such long, fair, well set ears, still keeping their sweet flavor and early season, that we adopted it as our early staple corn, and now could not dispense with it.

Radishes, beans, beets, cucumbers, and many other vegetables adapt themselves with joy to change of climate. Among the best and most "willin'" which we have tried of each, I would name Vick's Early Scarlet Globe and Philadelphia White Box for radishes; Early Blood Turnip for beets; Beauty of Hebron for potatoes; Blue Peter and American Wonder for peas; Chicago Pickling and Early Cluster for cucumbers; King of the Garden (Lima), Early Mohawk, German and White Wax for beans. The Beauty of Hebron potato has been grown with us for nearly ten years, and has superseded the old Early Rose, as being earlier, mealier and quicker to cook, and more productive in yield. Two crops

are generally raised from it in one season.

The German Wax bean also deserves special commendation as being very early, tender and cookable, giving an abundant early crop of beans, which, if clean picked and the rows well shaded when the "dog day" rains come on, the plants will bear again a second or good aftermath. Indeed, we can heartily recommend the whole set of Wax beans for southern planting, as needing no acclimatizing, bearing well the first year, and being very tender and well flavored, for each and every variety has done well in our garden.

L. GREENLEE.

THE CHINESE SACRED LILY.

A writer in *Orchard and Garden*, last winter, mentioned depreciatively the double form of this flower. He says: "The single is not only sweeter, but much prettier and more abundant in bloom. The scape of the double form bears only two, rarely three, flowers, while that of the single bears a great cluster, from eight to twelve on a well grown bulb. The single form being so much better there is no reason why the double should be imported at all."

My experience with these bulbs gives me a different impression. I had, last winter, both forms of the Chinese Lily in bloom, and I much prefer the double. The flowers are very double and of fine shape. The room was filled with their fragrance. The perfume of the double far surpasses that of the other. There were seven blossoms on each of the scapes of those at one time, and more buds to open, so that in this respect, also, they are equal to the single, on none of which were there more than six or seven buds at the most. There are more flower scapes, however, on the single. double had only three from its four separate clumps of leaves. These were all from the side bulbs; the center of the parent bulb only showing a tip of green. One of the single bulbs had five flower stalks, but there were seven separate clumps of foliage. The other had four scapes and six distinct clumps. So, taking all things into consideration, I think the single are not really ahead of the double in flower bearing.

The huge parent bulb had several side bulbs, some of which grew out horizontally, thus making it difficult to pot them. They are so large I had to break off two from one immense, awkward bulb, to bring it into shape to plant in a seveninch pot. Other bulbs are erect. From the very smallest there springs up a plant, so that the foliage being dense, and from fifteen to twenty inches in length is of itself very attractive. Its average width is an inch. The blossoms. so closely resemble those of the Polyanthus Narcissus, I care less for them, but the plant far surpasses it in the density of its foliage. The double lily grew in water, near a northwest window, where it did not get half an hour's sunshine, yet it grew faster than either of the others. which stood on my plant stand in a sunny window, one in earth, the other in water.

This, my first observation with this popular plant, is highly satisfactory. It was about eight weeks from planting to blooming. Those who have not cultivated them can try them the coming winter. I set my bulbs in the ground in the spring, as I do hyacinths, for I do not find bulbs satisfactory for second b'ooming in the house.

M. D. Wellcome.



FOREIGN NOTES.

MANURIAL REQUIREMENTS OF GRAPES.

Within the last few years considerable advance has been made in the knowledge of all that relates to the application of manures, and not the least important is that which shows us that there is a direct connection between the supply of nitrogen to a plant, and the formation of non-nitrogenous substance.

In experiments at Rothamsted with the sugar-yielding root crops, it was found that there was more sugar produced the larger amount of nitrogen applied as manure, although not in proportion to the amount supplied. Also that the efficiency of a given supply of nitrogen is greatly dependent on the available minerals of the soil. Taking the mean of many investigations in which potash formed an ingredient in the manurial supply, it was found that one pound of nitrogen in manure yielded about twenty pounds of sugar. Fresh ripe grapes contain, on an average, about twenty per cent. of sugar. Now sugar is an organic substance composed of carbon, hydrogen and oxygen, constituents which are derived from the atmosphere and water. So that if nothing were taken from the soil but pure sugar, there would be no loss of mineral constituents. But it happens in practice that nearly the whole of the constituents of the vine cane, and of the leaves, are lost to the soil. Besides, the skin of the berries, and the seeds, contain a large proportion of alkaline salts.

It is obvious, therefore, that in the growth of grapes there is, besides vegetable matter, a great loss of the mineral ingredients of the soil. To show the nature of this loss, it may be mentioned that a ton of grapes would contain about nine pounds of alkaline salts, which would be principally potash, besides that removed by the growth of the wood and leaves. So that nearly as much mineral plant food would be lost to the soil as by the growth of a corresponding quantity of sugar-cane.

It is extremely desirable, therefore,

that in all manurial applications to vines, both phosphates and potash salts should enter into its composition. Hence, we find VILLE stating that he used to think the Leguminosæ, and the potato, were the plants which showed a special preference for potash, but he now observes the vine distances them in this respect in a most surprising manner. In the case of the potato, the suppression of potash manifests itself by a diminution of the crop; with the vine, however, little or no fruit makes its appearance, and we virtually get no crop at all. Further, when potash and phosphates are lacking, the leaves of the vine do not attain their full development. In the month of July particularly, Professor VILLE has noticed that the leaves become red, and spotted with black; after which they often become very dry, and are easily reduced to powder under the pressure of the fingers.

Experiments with grapes at the State College of Kentucky, U. S., recently, have shown the effects of fertilizers containing potash and phosphates were very marked. The vines so treated were more thrifty, and comparatively free from blight and disease, which was more or less destructive on vine areas not so treated.

J. J. WILLIS, in Gardeners' Chronicle.

CLEMATIS LANUGINOSA.

In the great family of Clematis, lanuginosa and its varieties play a great part. They are as valuable as the purple Jackmanni itself, and now adorn with flowers of rich beauty many a porch, arch, and trellis in English gardens. The illustration that accompanies these remarks represents a plant of the variety Lady Caroline Nevill, which is of a French white color marked with mauve bands, clambering over a porch, and in all good gardens there should be features of this kind—delightful breaks of delicate colors that give lasting pleasure. Such a variety as this points to the energy of the hybridizer who has raised a large number of varieties, distinguished by the size of the flowers, some as large as small

plates, and the softness of the colors. The shades are mostly of white, lavender, and with stripes of mauve or violet, but these require contrast to bring out this softness of hue, and to achieve it plant



CLEMATIS LADY CAROLINE NEVILL.

with the dark flowered types as Jackmanni. The species was introduced from China, and will not, like our own Traveler's Joy, thrive anywhere. Its constitution lacks vigor, and will only in warm light soils attain perfection. The hybrid varieties do not fortunately show

this evil trait in the same degree, and when planted in good soil will soon make great progress, sending out strong shoots laden with the big saucer-like flowers. Treat them well at first, and do not put them against trees or shrubs, as one would the stronger-growing C. Jackmanni, viticella and patens. If the soil is naturally sandy, it is best to enrich it with manure and loam to promote a healthy growth, and during the growing season keep the plants well mulched and watered. If the reverse is the case, then mix plenty of sand and brick rubbish with the staple to make it free and porous. Plant carefully, and in early autumn to give the Clematises time to become established before winter. Unless this is done failure will result. It is bad planting and pruning that have prevented this race of climbers from developing the beauty they are capable of under good management. Use the knife cautiously, removing only the weak shoots, and remembering that it is on wood of the previous season that flowers are produced. In many gardens Clematises are planted but either weakly bits are put in, or the plants never receive proper treatment, or there would be brighter pictures than now prevail. There is nothing troublesome in the culture of the lanuginosa varieties, and a mass of bloom tumbling over some bold piece of rockwork, or adorning a pillar, post or arch has a beauty essentially its own. The illustration that accompanies these remarks show the kind of thing that should be aimed at to get the full richness of this section. Of the many varieties, very useful is candida, white, which looks well not only as a climber, but permitted to spread about over the surface of a large Then we have Lady Caroline Nevill, previously described; Otto Frœbel, which has very large, grayish white flowers; Mrs. Moore, mauve and white; Gem, lavender blue; La Mauve, and Mrs. Hope, which are of a mauve tint.

London Garden.

BEGONIA GLAUCOPHYLLA.

This Begonia is seldom satisfactory in a pot, but place it in a hanging basket and it forms a very handsome specimen that will flower for months together; indeed, a plant of it that produced a great number of blossoms throughout the whole winter has scarcely been without some since that time. So free blooming is it, that a cluster of flowers is produced from nearly every joint, and as many of the shoots hang down to the length of a vard or more, it will be readily understood that the quantity of flowers borne by a single specimen must be considerable. The blooms of this are of a peculiar reddish salmon color, and the foliage is of a very distinct light green shade. This Begonia can also be used for pillars or covering walls, but it is perhaps as a basket plant that it is seen to the greatest advantage. In common with most other members of the genus, this can be easily struck from cuttings. Besides the specific name of glaucophylla I have also seen it under that of Comte de Lim-H. P., in The Garden. minghe.

PHILADELPHUS MICROPHYLLUS.

We have already figured and described in our pages this charming little hardy shrub. Here is an opinion of its merits by a correspondent of the *London Garden*:

In this little Mock Orange we have a most charming addition to hardy shrubs. There is a large number of Mock Oranges, but they are so much alike that it requires a very discriminating eye to detect the differences between some of them. There is no mistaking this new comer, as it is quite distinct from all the others. It is a pigmy in stature compared with the others, as the largest plants I have seen are under a yard high. The leaves are small, much like those of a Myrtle, and the twigs fork out on opposite sides of the stems in a very regular way. The flowers, each over an inch across, have four petals arranged crosswise and of snowy whiteness. They are borne singly on the tiny twigs, but they are so numerous as to quite wreathe the upper half of the shoots, so that a well flowered bush looks like a mass of white. It grows into a dense, compact bush, and is altogether a very dainty little shrub, and quite worthy of a choice place in a garden.

Half a dozen plants of it placed a yard apart in a round bed on a lawn would in a season or two be quite a feature, and there would be no harm in having white Lilies among them, so as to continue the white mass of bloom after the Mock Orange is past.

STRAWBERRIES - STRAYBERRIES.

Mr. Shirley Hibberd, in the interesting lecture read by him before the British Fruit Growers' Association on the 27th, on the history of the strawberry, asserts that the name strawberry was originally strayberry, a title derived from the wandering habits of the runners. Is this correct? "Strawberry" may possibly come from the obsolete word to straw, now surviving in the word to strew—

"Strew! then, oh, strew my bed with rushes."

-Moore.

"Strew roses in her path."

The English name probably originated from the wood strawberry, and it is well applied, for the sequestered banks on which it delights to grow are really "strawed," "strowed," or "strewed" with the bright and lively flecks of crimson fruit of this wood loving plant.

T. F. R., in Gardeners' Chronicle.

A NEW ROSE.

A new variety of rose is thus mentioned by the *London Garden*:

Flowers of a finely colored and scented new Hybrid Perpetual rose have been sent us by Mr. HENRY BENNETT, of Shepperton, and it is another valuable addition to a long list of good things this raiser has given us in the rose way. The flowers are very showy, and remind us when fully expanded of those of Ulrich Brunner, but they are quite distinct. Their color is rich crimson, shaded with a bluish tone when open, while the scent is strong and rich. The vigor of the bloom and stem indicates unusual robustness in the plant, and if this is the case, then we have a welcome rose of fine bold character for the garden. Its name is Captain Hayward.



PLEASANT GOSSIP.

STRAY LEAVES.

Noting the inquiries in a recent issue regarding Fuchsias, size of pot, etc., perhaps I am not too late for a helpful suggestion or two, and as I have had first-rate results, I feel safe in offering them.

To succeed well with any plant, I believe the first point is to find out its native country and the conditions under which it grows there. By supplying these conditions we have opened the broad road to success.

The Fuchsia, we are told, is a native of the woods of South America; what do we know from this? First, that very little direct sunlight ever strikes it. Second, that the soll about its roots never gets dry or even approaching that condition. Third, that this soil is of the very richest sort. Fourth, that the air it breathes, for all plants breathe as truly as we, is of a comparatively high temperature, but that it is also moist.

My Fuchsias are in an east window, where they get plenty of light and the morning sun for an hour or two. The leaves are kept free from dust by frequent spraying. The soil in the pots is never dry even on top. The pots are large enough for ample root growth, as a Fuchsia wants plenty of room. About three times per week they get a tablespoonful or so of manure water. Result: the plants got from Vick, by mail, are making a fine growth and blooming, have joints two and three-fourth inches in length, and leaves four and one-half inches long, not including the stem, without spot or blemish, of a rich green color and free from insects. Try it yourself.

As regards the saucer system of rooting cuttings, have had very good results from it. A Saxifrage, commonly called Strawberry or Beef-steak Geranium, rooting sufficiently to pot in seventy-two hours, and common Geraniums in ninety-six hours. This may be nothing wonderful, but would be glad to hear from any one who is prepared to tell a bigger one and stick to it.

By the way, who knew that Nasturtium, so called, would root from cuttings? Well, I don't know much, and so I didn't. Having occasion to cut off some side shoots that were going to crowd other plants, they were thrown carelessly on the ground that night. The next day the idea occurred to see if it would root; just then my other half came out and suggested the same foolish notion, and more as a joke than any thing else, one was stuck in the saucer of sand, and in five days had roots an inch long. This gives us an excellent way of securing any desired arrangement of special sorts and colors for masses, etc., from mixed seed, which can be started early and allowed to bloom, and then made into cuttings, which can be arranged as desired. This may not amount to much, still it may to some one. The cuttings throw out the roots from the side of a joint.

And now, if our worthy editor don't look cut-worms and green-flies at me when I present this, you may hear from me again.

Let me say, in conclusion, that I have found the last edition of *Handbook of Plants*, by the late Peter Henderson, a most excellent helper in securing the needed information suggested in the first of this letter.

D. M. Farnsworth.

A FRENCH ROSE.

One of the novelties this season among French Roses bears the name, La France de 1889. The Revue Horticole says of it, that it is similar to Paul Neyron in dimensions: for merit it much surpasses that variety. It is a descendant of La France, and was produced by MOREAU ROBERT. It is, without doubt, one of the best novelties sent out this year, at least, such is the opinion formed from seeing it on young plants. The color is a magenta-rose, very soft at the center and lightly shaded with violet. Its dimensions are relatively enormous, attaining five and a half to six inches (14 to 15 centimetres), and even more in diameter.

THREE JACKS.

At the yearly rose show in Paris I was obliged to remark that the Jacqueminot roses had taken on, if possible, a deeper tint of scarlet crimson, and the leaves seemed larger, and after admiring the pink, blush, yellow and white ones, some with new names in surprisingly familiar old robes, that the dear old Jacks held

their own, and also were the most desirable, if one dared choose from an hundred selections.

Flowers are word painters, some emphasize loudly in blushing colors, others interrogate us as to our state of mind, as in pensées, and again the more hardy ones exclaim in overpowering fragrance.

As the English steamer left Boston a half dozen Jacks, with long stems, were sent me as an escort on the journey; three of these I sketched as faithfully as I could portray on a rocking ship, and I compared the sketch with the improved

specimens at the rose show in Paris, and an old florist said, do they, indeed, grow such roses in America? Why not? As I walked down Broadway, New York, after five years' absence, I was struck with the silence and sadness at sundown and missed the glaring, enticing lights of the Boulevards, but the flowers were peeping out welcome from every florist's

shop window, and the queen of flowers, the rose, was more beautiful than I had ever before known in America. Comparisons are odious, but I am writing from Paris, the home of the rose. I buried, as you may, reader, all sadness in the heart of a rose, and the tears, which came involuntarily, recalling how much alone one may be in a crowded city, served as a crystal dew drop, so I made cup bearers of the roses, to carry away sadness never to be returned to me.

Why does not charity suggest a floral enterprise, where the poor may buy roses for a few sous, as in Paris? A red rose will sell when a white one must wait for a death or wedding occasion.

Love, romance, passion, fancy, and ambition are centered in

the bosom of a red rose. Rosa Broughton, when inspired to write "Red as a Rose is," had before her vases of red roses, and each leaf seemed suggestive of some event to be weaved in her romance.

There are moments in life when egotism comes unbidden to the most generous nature and stoutest heart—when dumb from contact with a jostling, bustling world, each bargaining for his own, when the sweetest disposition becomes mutely submissive, or no longer aggressive or combative when putting aside honor, ambition, and even hope. The

lilies, which toil not nor spin, can teach a lesson—these are word painters. I contend that flowers enter our lives at birth, boon companions, and they accompany us to the tomb, and that if, while living, we can make companions of them, we can't be sad, and if one is fortunate enough to have six Jacks at forty-three, they are worth a garden of daisies, pervenches (maiden's eyes), pensées (maiden's thoughts), carnations and minor blossoms at sixteen. And I claim first place for Jacqueminot.

The rose show, financially, was a success, the fruit was bearing in little pots, as is the mode in Paris, for last night, at dinner, I had in front of me a pot with most deliciously ripe grapes, and my neighbor culled a peach and reluctantly cut it in half, as if he were standing in "the orchard of the king," and obliviously disregarded the care, time and patience of perfecting. Not so in Paris. So fruit and flowers are in a high state of perfection, in advanced thought on both sides of the water, and one says to his florist, I want peaches, pears, grapes or plums, roses, carnations, Chinese French mimosa, orchids, or the Panama Holy Ghost flower, and it is served at seven for a golden consideration in Paris. How is it in New York?

Refinement demands refining accesories, these come in trained succession in floral tributes. I think small flowers are a little exclusive, each more so than the rose, for to every one is given a proper time and season, and while in bloom they hold first place; but Jacqueminot roses never go and come, these are fixtures, but bear no association with other roses; tie three or six with the new gold guaze ribbon in a simple bow knot, and you will have imprisoned a perfume with a golden band, and possess the most decorative and beautiful flower that I saw at the Paris Rose Show of 1890.

ADA THORPE LOFTUS, Paris, France.

THE GERANIUM.

As a good mother loves her children, and shows you clean, healthy, well mannered little ones, so does the flower lover display healthy, clean, blooming plants.

There is no good thing under the sun that is not a monument of some one's care. The housewife whose windows are filled with thrifty plants, glowing bright even on a cloudy day, has numerous cares, but she never forgets to bathe and train her plants, and pluck from them the faded leaves and blossoms, for this work is to her the rest of her weary life.

I believe there is no one plant that gives such universal satisfaction as the geranium. It is easy to propagate, bears a deal of neglect, can be made to bloom constantly, and no insects trouble it. Its colors are varied, and a collection of twenty or thirty varieties in full bloom is a sight to behold. The variegated rosescented geranium, I think, is a treasure. It grows in good shape without much training, has an attractive appearance and is very fragrant. Its silver edged leaves show the pink tinge at a proper angle, and on the whole is as attractive almost as a haby; to say the least, it twines about the heart like an old friend.

The skeleton-leaved lemon geranium, when properly grown, is very charming, indispensable among cut flowers. I owned a prize last year, being the most thrifty and finest shaped one I ever saw. There was no branch or leaf superfluous. When six inches high I set it in the open ground, and nature shaped it. The slip was the top of an old plant.

I find among the many contributions to this MAGAZINE so many bright hints, such useful experience, such flowing wisdom, that the MONTHLY is one of my most welcome visitors.

MRS. DR. HOSKINS.

FINDING PATHS TO CALIFORNIA.

At the time of General Fremont's death he was engaged upon the manuscript of a paper for The Century's forthcoming series on the California Gold Hunters. It was to be entitled "Finding Paths to California," and was not only to deal with the several exploring expeditions, but to narrate the writer's intimate connection with the events which led to the conquest and occupation of the territory. The work will be promptly continued by Mrs. Fremont. A first draft of the article had been made, and the subject had been so recently and closely discussed by General and Mrs. Fre-MONT that she will have no trouble in completing the manuscript, for which she had already written an introduction, as well as a supplement describing her life at Monterey, in 1849. A fine portrait of General Fremont from a daguerreotype of 1849 or 1850 will appear in the September number of *The Century*, along with portraits of Commodores SLOAT and STOCKTON, "DUKE" GWYN, and Governor BURNETT, in an article giving account of "How California came into the Union."

TOMATOES IN JAMAICA.

I have read in the American Garden for May, the result of a large experiment with tomatoes on Long Island, in which the Ignotum is considered to be the best variety for family or market use.

Whilst there can be no doubt the report is of very considerable value to northern growers, it unfortunately is no guide or proof of what the Ignotum would do in a more southern or tropical clime, and I should be glad if some of your subscribers down south, say Texas or Mexico, who have grown this variety, would kindly give me, through the MAGAZINE, the benefit of their experience, with mode of culture.

I have grown tomatoes very successfully without a particle of manure or fertilizer of any kind whatever, and have had Mikados weighing twenty ounces each, Vick's large yellow and Cardinals of fourteen and sixteen ounces each. Golden Queen turned out with me the most prolific and continuous bearer of any variety I have ever known, the fruit, although not large, was perfectly round and smooth as an apple, of a beautiful deep yellow with a tinge of red next the sun. I consider one of its best qualities is that of not cracking in wet weather, like most other tomatoes.

I should very much like to try the Ignotum, but will wait to see what information I can gain of its capabilities in the more southern States. ' Everything regarding tomato cultivation, in fact, I may truly say, cultivation of anything in Jamaica, has yet to be learned, and the question of manuring or not manuring must be decided only by experience, for it is astonishing how much our soils vary here in the lowlands, even on a one acre My experience with tomatoes inclines me to favor transplanting several times when the plants are young, and finally planting them in holes prepared for them in the ground, say sixteen or eighteen inches in diameter and two feet deep. Such holes being filled up with richly manured soil. I may mention that my best tomatoes were gathered from plants which grew a few feet from a drain, or rather, bamboos laid a few inches below the surface, through which a small stream of water was constantly running and leaking through the bamboos here and there, and I am inclined to think this was the chief cause of my success.

Can you tell me where I can procure mature bulbs of Tropæolums, either tricolorum or speciosum?

Our exhibition, which is to be opened by Prince George of Wales on the 27th of January, 1891, is making fair progress, and everything in connection therewith is working as satisfactorily as can be desired. Demerara, and all of the other West India islands, will be most ably represented, and the greatest enthusiasm exists throughout the island, and even the most sceptical now admit that the exhibition is bound to be a grand success, the result of which will be an entirely new Jamaica.

The preparation of exhibits by the people of Jamaica for the great World's Fair of 1891 goes merrily on. At last the people throughout the length and breadth of the colony, I am glad to know, are determined, and as a matter of fact, are doing all in their power to make the collection of Jamaica exhibits as large and as interesting as possible.

WM. SPECK, Kingston, Jamaica, W. I.

STRAWBERRIES.

Many a woman in village and country, and occasionally one in the city, longs for more strawberries than she can afford to buy, who, if she knew how little it costs, both in ground and labor, to raise them, would have an abundanc.

Let me tell just what I did with a strip of ground one yard wide and two and a half yards long. Some eight or ten years ago, about the time the Crescent strawberry came into notice, I heard Dr. Hexamer tell at a farmers' club gathering how well it was adapted to beginners and lazy people. That was in July; early in August I bought twelve potted plants, potted, because I wanted immediate returns the following year.

My small garden being about occupied, I set them closely — rows two feet apart and plants one foot apart in the rows—in well manured ground, so when first set they occupied just two feet by six. I allowed one runner to take root from each plant that fall, nipping off all others, and before winter had about twenty-four sturdy plants, forming two crowded rows six or seven feet long. All weeds were, of course, kept down.

The following summer, in the height of the season, I picked two quarts a day from that little bed, the quantity, of course, tapering each way toward the be-

ginning and end of the season.

The Crescent is very hardy, a luxuriant grower, and needs only a light covering in winter, of straw or stalks, or something that will not mat down. I calculate to be able to see every plant in walking over a patch when covered.

The past summer I had a larger patch in hills two and three feet apart, plants two years old. I picked half of the patch each day, and from each thrifty hill it was a common thing for me to pick a pint bowl heaping full, being two days' yield.

For home use I like this plan of picking better than every day, for the Crescent is, I must confess, a sour berry unless fully ripe, and when it first turns color it is not fully ripe.

A beginner would not be likely to do as well as I did, for it was not the first of my strawberry growing, but I have shown what can be done with a little ground and a little labor.

For planting in the spring common plants are as good as potted ones, for no crop can reasonably be expected the first year; a dozen plants set three feet apart each way would multiply enough to make a good bed the following year.

The ground should be light, not wet and soggy, kept free from weeds (and runners, unless needed for planting), and in the bearing season, if the weather is dry, a mulch should be kept on between the rows.

In the spring I always remove the winter covering, hoe the patch over to kill the weeds, and after a few days of sunshine spread it on again between the rows, and let them alone till after bearing.

There may be other berries as easily raised as the Crescent, but I have never found them.

Some say the Crescent, being a pistil-

late variety, will not bear unless planted near some other kind, but I have had them quite distant from any others and have noticed no difference in the yield.

It might be safer to plant a few Charles
Downings or Cumberland Triumphs
near them.

E. N. B.

VICK'S CAPRICE.

Just as I read of this rose in the August number of your MAGAZINE, by A. H. F., Akron, Ohio, my daughter brought me one from the garden, and called my attention to its peculiar and pleasing fragrance, and asked, "Is it not a beauty?" My original plant as well as the buds are showing up well, and I am greatly pleased with it.

Next season we may expect to have plenty of Marechal Niel roses, as I have a lot of buds set in strong canes of our wild prairie stocks, two feet from the base, so that they can be easily bent to the ground and covered in the winter. As I have stated before, this is the only way I can get this noble rose to do any good with me.

S. MILLER.

ANTHRACNOSE OF THE VINE.

Besides the evils of insects, mildew and rot which the vinegrower has to contend with, there is another, as yet but little known, but which is already spreading from a number of centers. This is what is known as anthracnose. The Greek word, änthrax, means burning coal, and from it we derive our word anthracite as applied to one form of coal. As a medical term anthrax means a carbuncle, and is used with reference to man and the lower animals. Anthracnose is a disease of the vine and other vegetation.

A vine affected with this disease is covered with small dots or larger black spots along new growth of the cane or shoot; at these spots the bark dies and turns black, and the disease affects the wood underneath, killing it, when it will become brittle and will break with the least force. The effect is to weaken the vitality, and in bad cases the whole vine becomes involved and is destroyed. This disease exists in different parts of the country and is doing much injury. A letter in reference to the grape crop of the present season, from W. CAYWOOD, of Marlboro, Ulster county, in this State,

under date of August 4th, has the following:

"The probabilities now are that we will not have more than half a crop in this section, in fact, some localities have given up all idea of having any, and are discussing what to plant in place of grapes. With us, nearly all varieties are affected more or less with rot, mildew and anthracnose. Our Ulsters, which we have planted more extensively than all others, have so far been free from all disease; this season we have an exceptionally fine showing. Notwithstanding reports from numbers of our growers that spraying is useless, we are convinced that when done systematically and thoroughly, it will, to a great extent, prevent both rot and mildew. The anthracnose, which is fast becoming equally as disastrous, we have not yet found a remedy for."

An experiment with reference to anthracnose, made by H. L. LYMAN, at Charlottesville, Virginia, in 1888, and reported to the Department of Agriculture, was published in Bulletin No. 10 of the Botanical Division in 1889. The following is the account:

"I determined to make an experiment for the prevention of anthracnose, because of the great amount of damage done by it in 1886 and 1887 to my Elvira and Delaware vines, and also because of its prevalence amongst other varieties grown in the neighborhood. The formula used was that of a saturated solution of sulphate of iron, which was applied during the latter part of February, and in the following manner:

"Cheap, coarse sponges were wired to the ends of round sticks of fifteen inches in length, and buckets were used having a spatter strip nailed across the top. The sponge was immersed in the liquid, withdrawn, struck against the spatter strip to save waste, and the vine then washed thoroughly from the base to the free ends. Five hundred and fifty vines were thus treated, and fifty left untreated. The entire absence of this fungus amongst the treated vines led me to believe that the effects of this application were most satisfactory. In the untreated rows the Elvira suffered a loss of from 20 to 25 per cent. of fruit, and a corresponding depreciation of vitality of the vines, while the Delaware, which is also subject to mildew, did not give any grapes worth mentioning, and made a very inferior growth of cane."

The recipe given for this disease by LAMSON SCRIBNER, botanist at the Experiment Station at Knoxville, Tennessee, and a vegetable pathologist of well known repute, is the following:

"Bathe or wash the vines while dormant with a 50 per cent, solution of sulphate of iron, and during the growing season, if the disease appears, dust the vines with a mixture of lime and sulphur in equal parts."

The following extract from the *Pacific Rural Press* in regard to the use of copperas, although having no direct reference to anthracnose, is yet a testimony to the value of washing the dormant vines with the solution described:

JACOB SCHRAM, of St. Helena, the well known vinegrower, is naturally much interested in the announcement made recently in one of the daily papers that Professor Felix Michel, a Frenchman, had discovered that a solution of sulphate of iron (green vitrol or copperas) was a cure for the phylloxera of the vine. The reason Mr. Schram takes so much interest in this announcement lies in the fact that Mr. Schram himself announced the same thing at a vinegrowers' meeting in this State a decade ago, and not only that, but has made constant use of copperas in his vineyard practice, and has found much benefit therefrom. We had a talk with Mr. SCHRAM on the subject at the meeting of the State Horticultural Society, and he assured us that he not only used it on vines, but used it in his compost pile, aiming thereby to kill all injurious germs of insects or fungus which might lie therein. In application to the vine itself, the following is his practice, as told by himself to a re-

"In the spring before the vines bud, but after they have been pruned, I use fifty gallons of water to ten pounds of sulphate of iron. I take a barrel and pour in a bucket of hot water to warm it. Then I throw in the sulphate of iron and add another bucket of hot water and then fill up with cold water. I stir it to prevent the chemical from crystallizing. I apply it with a sponge tied to the end of a stick, thoroughly swabbing the vine and allowing some of the liquid to sink in around the roots. The mixture will pre-

vent mildew and make weak vines strong. It is the most wonderful stimulant I ever saw, and as it is very cheap, there is no reason why everybody should not use it. None should be used while the vines are in leaf, as it will burn the leaves all up. During the past sixteen years, while vineyards all around me have been affected with phylloxera, mine has been perfectly healthy, owing to the use of this mixture. I do not think its efficacy can be longer controverted.

GET OUT OF THE RUTS.

Don't look for any new ideas, for you won't find them. These things have, in all probability, been said and better said before; but it has been said that a man never sees an advertisement until he has read it a hundred times, and the same is true of many good ideas. What lover of flowers has not been disgusted in winter, going into house after house and seeing a few or many long-legged geraniums with a single sickly cluster of bloom, or none at all, and the same repeated at every place? "Simply this and nothing more." Now, I am as fond of geraniums as any one, and they bloom as freely for me, so it is not sour grapes.

But why not, just to break the monotony, have something for this winter that will thrive and bloom? Every successful grower of geraniums knows that to bloom they require a fair degree of moisture and plenty of strong sunlight. But strong sunlight is apt to be a scarce article at that season, and one over which we have not the slightest control. But there are plenty of plants that rather shun strong sunlight, and bloom better partially shaded.

The pansy is such a plant. It needs no praise at this day, and is a universal favorite for spring, summer and autumn; but where is the person who can look me squarely in the eyes and say that he has made it a winter pet? why not? Surely the plant itself is as graceful and pretty as the geranium, and the flowers are fully as desirable. Now is the time, August 1st, to begin, with us, further south a month later would do. you have plants just starting into bloom, they are what you want. Keep all buds pinched off, also any long branches. Take them up carefully and put into pots, or into a box or pan, remembering that

pansy roots run deep. This will give you strong, vigorous plants that will bloom all winter freely. If you have no plants suitable, seed sown now and kept moist and cool will start finely, and if urged a little with manure water will make blooming plants by frost, and surely such plants are worth the little trouble they cost.

The well known sweet alyssum, is another little favorite, so fragrant, just the thing for the buttonhole with a pansy or two. Seed started now will give you a mass of fragrant white blossoms all winter, if not allowed to go to seed. Dianthus Chinensis makes another bright bloomer for winter pot culture, worth a dozen bloomless geraniums. A few nasturtium blossoms will make a room fragrant with their rich perfume, and if started now in pots or small boxes and pinched back properly, will make you glad all winter. Many other of our fine annuals might be mentioned, but space cannot be given, and your own judgment and taste once started in the right path will lead you right. As the pansy is a rather hard flower to handle, it would be better for the beginner to try petunias. nasturtiums, or some other flower with the parts in full view.

D. M. FARNSWORTH, Marquette, Mich.

A FEW GOOD HOUSE PLANTS.

Certain varieties of fuchsias grow and bloom freely in the window garden all winter. They require a rich soil, and if not growing thriftily should be banished to the cellar, and probably will come out the better for the rest. The soil for fuchsias should consist of good garden loam mixed with well rotted manure and a little sand; if procurable, well rotted sod will be better than the loam. When they come into bloom give them weak liquid manure, or some weak artificial fertilizer once a week. They require plenty of light and air, but do not do well in too high a temperature, as red spiders are so apt to trouble them when in a hot, dry atmosphere. Syringe them frequently on both sides of the foliage; use warm soap suds, rinsing afterwards in clear water, if troubled with the red spider. The varieties of fuchsias best for winter bloom are Speciosa, Lustrous, Carl Halt, Mrs. Marshall and Syringaflora.

Begonias are very fine for window plants, as they are mostly very free in

bloom, the foliage is also wonderfully beautiful, and well grown specimens are very interesting as well as most beautiful to look upon. The soil for them should be rich, and they require sufficient moisture and little sun, but plenty of light and warmth.

Jasminum grandiflorum is particularly satisfactory where it can have a rich soil, warmth and sunshine. It blooms from September to January, and the fragrance of its white, wax-like blooms is exquisite. It is best trained on a trellis.

The abutilon, sometimes called flowering maple, is another good plant which may be grown as a small tree, like the oleander, or kept dwarf and bushy. Give it a rather sandy soil, give air when the weather is favorable, water freely, keep it pruned into shape, and do not keep it too hot and dry or it will not bloom so freely.

The Mahernia odorata blooms only in the winter and early springtime, when it is completely covered with its graceful yellow blooms, having a delightful perfume. One good plant will scent a room. It should not be overwatered nor allowed to get too dry. Repot after it is through blooming, and keep it pinched during the summer to insure its good shape.

Nierembergia grown from seed sown the summer before will thrive and bloom in sun or shade. The old plants may be wintered over in the cellar, and when set out again in the spring will bloom all summer.

Linum flavum blooms well during the winter. It has smooth, shining leaves, and pretty, lemon-colored flowers, like medium sized morning glorys in form.

Cuphea platycentra is always bright with bloom, and has such cute little tubular blossoms of a bright scarlet tipped with white.

Myrtus communis is a lovely little tree-like plant, having small, dark green foliage of very pretty shape and quite fragrant. It has small, white flowers, and makes a very good window plant if grown in a small flower pot. Keep it fresh and clean by syringing it often. Plants may be grown in a north window, and will last many years as they are moderately hardy.

The ardisia, with its red berries, is one of the best for the house, as it is rarely troubled with insects. The berries last

much longer if in a cool temperature, still the plants will not stand freezing a bit.

Clumps of lily of the valley will bloom in the winter in a warm, light window. The clumps must be good, strong ones. Start them in sandy soil.

The Impatiens Sultana is one of the most persistent bloomers known, and at least one plant should be in every collection. One thing it will not stand, and that is pinching back, for every time it is practiced the branch will soon drop off. To grow root cuttings successfully they must be placed in sand and kept at a high temperature. It, however, layers most easily, and also grows readily from seed. It likes a rather coolish temperature, for when in a dry, hot atmosphere it is easily attacked by its only enemy, the red spider. Sponging, particularly on the under side of the leaves, should be frequent, as this will generally keep the spider away. It likes a rich, fine loam for soil, and should not be overpotted.

The adiantums, or maidenhair ferns, are delightful plants for the window. Adiantum Farleyense and gracillimum are lovely, as also the Pteris serrulata, P. tremula and P. argyracea. They must not be allowed to get dry nor be in the sun.

The sweet alyssum sown early in the fall makes a cheerful little plant by itself, or as a border in window boxes. It blooms all winter.

G. B.

A REVIEW.

The MAGAZINE for August came yesterday, and I cannot refrain from telling what a delightful number it is, every article is replete in interest and complete in itself. I have many times said, how much alike are the tastes of flower lovers. There must be a reciprocity of feeling. I have proof of this through correspondence with floral friends and articles written by those who love floriculture. How significant the heading of the article from the pen of Lora S. La Mance, "Give the Boys and Girls a Chance." I have lots of boys and girls, and I am so glad that I do not think it makes the boys girlish to love flowers. I teach them the opposite, and when I cull blossoms for corsage or hair decoration of my daughters, I always gather and make up bouquets for the adornment of my sons, and I have succeeded so well in cultivating a

taste for the beautiful that my boys, although grown to manhood, watch with as great interest for the different flowers as they come into bloom as do the girls or myself.

How very timely and true are the words in the epistle over the signature of KATE ELLICOTT. Talk of affinity between flower lovers, why, I, as well as she, have just cut the fragrant lavender for the second time, and the bushes are grown from the seed that I purchased of your father years ago. She dislikes ribbon beds; so do I, and last, but not least, she says that who shall have in their garden white or pink daisy balls, sweet alyssum, mignonette, pansies, violets, has refined taste. I have all these and many more.

"Paradise Regained," what a very significant heading, all too true, and as we are farmers ourselves, the truth of the article is apparent. No use to enumerate any more, all is good.

MRS. L. J. H.

STRAWBERRY VARIETIES.

The question of varieties in strawberries is an old one, but an old one that is ever new. The interest in this fruit is so great, both among amateurs and commercial growers, that the question of variety is always an important one. The perfect strawberry, either for the home garden or for market, has not yet been found, although hundreds and thousands of seedlings have been tried, and for the most part discarded. Probably no kind of fruit in cultivation is so susceptible to its location as the strawberry, and on this account the opinions of the most experienced growers in relation to particular varieties can be considered of value only as relates to their own locality of trial. Only a few varieties have, like the Wilson's Albany, and the Crescent, and the Downing, been found adapted to a wide range of country, climate, and soils. This character of the strawberry, therefore, throws the work of testing varieties on every grower of the fruit, and he can only know that a variety will be valuable to him when he has proved it on his own grounds. Among the newer varieties of strawberries that have been in course of testing for the past two or three years, we find, as usual, only a small number of them that are generally well spoken of. In looking over the many reports that

have already appeared as the result of the present summer's fruiting, we have endeavored to select those which have been most generally commended, and here mention them.

Of the newer varieties the Jessie appears to have made the poorest record; almost everywhere it has failed to make good the claims that had been made for it. It supplies a few large berries at the first picking, but afterwards nearly all of them are small. Only occasionally is it spoken well of. Probably there are localities where it may be satisfactory, but they are few. It must be retired from general cultivation for market. Amateurs who can give it high cultivation and are satisfied with a few large berries may retain it.

Bubach, or Bubach's No. 5, is very generally commended. It is a pistillate variety, herries large, fine color, very productive, but some think it a little too soft for long shipments. It will be largely planted.

Haverland has sustained its reputation this year and won new laurels. It is early, of large size, good flavor, very productive. Its only fault appears to be want of firmness, so that it is better adapted to a near than a distant market.

The Warfield, or Warfield's No. 2, is uniformly and highly approved. Plant pistillate, very productive; berries of medium size, but uniform, and with a brilliant gloss which makes them attractive; flesh firm, an excellent shipper. From the reports we are led to think that this fruit when ready for market is, like Wilson's Albany, acid and lacking in high flavor, though, like the last named variety, a higher quality is attained by allowing it to reach a state of perfect ripeness before picking, a condition attainable in the amateur's garden; but its quality is no objection as a market variety, and many purchasers prefer an acid fruit.

Michel's Early has many enthusiastic admirers. It is represented as a good, vigorous plant, producing perfect flowers and fruiting very early, and producing large crops of large berries; its color is said to be peculiar, being a blended pink and orange; form rather globular, quality high. As to its shipping qualities there is some disagreement, some claiming it to be a good shipper, and others that it is a little soft. It promises to sup-

plant the Crescent in productiveness and as an early variety.

Staymen's No. 1. This is a variety of Kansas origin. A hardy, vigorous plant; flowers pistillate, fruit larger and firmer than Crescent, fine quality. This plant is very productive with ordinary cultivavation and on moderately rich soils. Seems adapted to a wide range of territory.

Taking all the reports of the strawberry for the past season, the five varieties above described stand at the head as market varieties for general cultivation, and are, no doubt, destined to be largely planted, especially as they have now been sufficiently long and widely tested to have their points well known.

As a late variety the Gandy, or Gandy's Pride, bears a good reputation. The fruit is large, showy, and of good quality, but the plants do not yield heavily. The flowers are perfect. Where there is a good paying market for a late strawberry this variety may be worth planting,

The Daisy is well spoken of by those who have tried it, for its large, healthy foliage, productiveness, and its good fruit, of medium size; apparently it has not yet been widely tested.

The Cloud is a variety that has been highly recommended, and a great deal has been expected from it, but it has been generally disappointing, and after this year's trial it will not be retained except in a few localities where it appears to give satisfaction.

Of the old varieties the Crescent will still continue to be largely planted for an early sort, and the Manchester for a late one, and the old Wilson's Albany is yet a favorite in many localities. In some places it rusts so badly that it has long been discarded, but it is a wonderful variety in its adaptability to a wide range of latitude, climate and soil.

Cumberland, in some localities, on clay soil, continues to be satisfactory.

The Sharpless will continue to hold a prominent place as a productive and profitable variety with many growers, but many others have already discarded it.

Without considering the many other

varieties which have been reported on the present season, we think they can all be placed on a rank inferior to those mentioned above, and that the summary here given fairly represents the consensus of opinions of American strawberry growers.

BLACK CURRANTS.

I, and others of this vicinity, have been the planters of Lee's Prolific Black Currant, and I would like to know what they are good for. To me they seem unfit for anything, on account of their disagreeable taste and odor. Please answer through the MAGAZINE, and you will oblige the son of an old subscriber.

S. F. D., Piqua, Ohio.

Some of our readers will open their eyes with astonishment at this inquiry, and we hope by another month an answer will be given by some one who appreciates the many virtues of this healthful fruit.

A BEAUTIFUL MORNING.

There are crimson clouds and feathery forms
In upper air,

And bright shapes tinged with varying hues, Stretched everywhere.

Some seem to swell and then unfold, Like blossoms rare,

From out dim space, and then, like dew, Dissolve in air.

Below them rise up weightier clouds
And misty banks,

And here and there tall spectres rise

In serried ranks,

Although the sky is azure-hued Above them all;

While on our heads a boundless wealth
Of sunbeams fall,

Was ever sky more beautiful,
Or breath more sweet?

Or greener boughs, or softer mat Beneath our feet?

We thank Thee, Father, for the earth, So beautiful;

We thank Thee for Thy gifts to us, So bountiful,

For bud and bloom, for ripening fruit; Each benison

Is fair to see. Lord, bring our hearts
In unison

With Thy dear self. May this new day

Be spent aright,

And every busy day that glides
Into the night,

Until their dawns for us are o'er, And we at last

Into you haven moor our bark, All tempests past.

MRS. M. J. SMITH.



OUR YOUNG PEOPLE.

ROGER'S LETTER.

My Dear George: See here, old fellow, when I promised to write you everything of interest connected with my course and visit, I'd no idea of having so much to write about—can't begin to do it; but being once well started, will write straight along till patience and pen give out, and leave the rest till such time as I see you.

Because my uncle is captain of an excursion boat, and because I live in one lake city, and was going to another, of course, my trip had to be made by water. (Uncle to take me free—something saved, you know — more chink for spending money and all that; you see how it was.)

Well, we hadn't more than got fairly off till I made for the pilot house, uncle gave me leave, and tried to draw the pilot out into spinning a yarn by asking him if fresh water craftsmen ever have superstitions like those of old seamen. He answered, that if they haven't they ought to have, for he'd had an experience himself that would make him believe anything in that line he might hear.

Such talk as that promised juicy entertainment, you see. So I settled into a good seat, and asked him to spin off that experience, if he'd like a good listener. He squared around, and said that bein' I was the captain's nephew, he believed he would. At once I decided to practice my short-hand by taking down his story, and now will copy from that into this letter, so you can have it straight.

"It didn't happen on the lakes," he began, "Nothing everdoes, 'cept storms and wrecks. (By the way, we're going to have a sizzler before morning," and his eyes swept the horizon anxiously.) "But 'twas when I was pilot of a Mississippi steamboat, making a down trip to New Orleans. It was just at dusk, and a big round moon had hove up in sight, sending a streak of shine along the ripples of the muddy water. I felt sort o' hushed and quiet, and fell to thinking of my mother in her lonely home. Suddenly we turned a bend, and I saw a steamboat

with fierce head-light coming straight at us with great speed. I fully expected our engineer's warning whistle to shriek out, but not a sound was heard.

"You see, young man," he went on, "the rule of all river craft is to keep to the left shore, going either up or down stream. So we were bearing hard to the east side, as usual when going down, and there was that insolent thing, with blazing eye, staving straight at us with all that open river space to the right. It made me mad. But there was no time to lose. I said to myself that if the sassy cuss wouldn't give way, we'd have to do it; but we'd make him smart for it thereafter.

"So I gritted my teeth and swung off to the right, and on came the other boat, never veering either way in its course. First, the head-light was close beside us as it shot by, then the body of the boat, then the stern—almost grazing us as it swiftly passed along, without sign or salute. As it fairly cleared us and shot onward, I looked after it to give it a parting blessing to ease my anger.

"As sure as you're alive, there wasn't an object to be seen from shore to shore, head-light and all had disappeared. I rubbed my eyes and stared in amazement. The bright moonlight made every thing plainly visible. I felt like one who has been dreaming, but was, in fact, never more wide awake than then. Suddenly I recalled that there had been no noise of machinery, no smoke from the smokestacks as the stranger boat had passed us, no human being in sight—all silent as the grave.

"Then a conviction seized me that I had seen a phantom boat. My anger suddenly cooled, leaving me as limp as a water weed and as wet, for a cold perspiration covered me as I pondered that I was in my sober senses, and had truly seen what I had seen. Coming shortly to where some bargemen were camping around a fire, I hailed them and inquired if a boat had passed up the river since

sunset, and got a rough retort for answer. They thought I was chaffing them. But I was too troubled to consider then how my query sounded."

Here the pilot paused, gazing at the sky inquiringly, until I rallied him to know if there proved to be any after significance to that supernatural development of a water craft.

"Yes," he answered, "that was a premonition of an awful disaster very soon to take place. But look at that sky; we're sure to have a big blow before long."

"Well, hurry up, then," said I, "and tell me about the disaster before my uncle sends for me." So then he resumed:

"Well, we got to New Orleans and back to St. Louis again all right. But on the very next trip down, just after we'd rounded that same bend in the river, and had reached the very point where we met the phantom boat, the boiler bursted, with an explosion that tore away the top and one side of the boat. Six men lost their lives and the boat was burned, what was left of it.

"The captain was one of the victims. He was not killed outright—a thousand pities—but was wedged fast by fallen timbers where the fire soon reached him. His head and shoulders were free. and he directed our efforts to release him, till he saw it was useless, then ordered us away out of danger. But first, he had directed that his wife, who happened to be on board, should be hunted up and kept away from him, so she should not know of his condition. He begged piteously, for God's sake, that some one would shoot him. Called me by name, saying he had thought I was a true friend who would help him in time of need. He was crazed with pain. None of us could do what he urged—not even the bargemen who came to help us. Half maddened, I rushed out of sight and hearing and buried my face in the marsh

"Our good, brave captain, how thoughtful he was of others while in mortal agony himself.

"That experience ended my river career. I went to my mother's home and remained while she lived. Then, feeling lonely, and hankering again for boat-life, I hunted up your uncle. A change had

come over my feelings. I wanted to cruise with a christian man, and I found him. I've never—great Peter, look there! we're bound to capsize!"

But we didn't, George, and here's an end to both short-hand copy and pilot's story.

However, we were caught in a whirlwind and twirled round like a top, the water rushing over the boat on all sides, washing away everything not made fast. The pilot had instantly fallen on his face, pulling me down with him and shouting to me to grip fast. The boat seemed to rise up on a cone of water, then the underpinning was apparently swept from under us, and down we came with sickening speed and plunge. In another minute the crisis had passed and we were saved from what had seemed imminent destruction. But the real storm had but fairly commenced. The pilot said the furies of the lakes had only been let loose in this first scene, and that the rest of the play was yet to come.

My uncle came up to look after me and bade me stay right there, as he should be every moment busy looking after the condition of the boat and quieting the terrified passengers. As night began to close in upon us he was besought to "put in" to the nearest harbor. But the safest place, he said, was in the middle of the lake; should he attempt to make harbor the heavy waves would dash the boat to pieces on one pier or the other at the entrance.

By this time, all but the "sea hardy" ones were getting disgustingly sick, despite all preventives, and despite staying out in the air until they had to be wrapped in waterproofs and lashed fast to the boat. Nothing would avail, and all betook themselves at last to their berths, where they soon attained a mental condition quite indifferent to a watery grave. O, you may well believe there is nothing like it.

Uncle finally helped me down to a berth in his large state room and then sent me some stuff in a broken goblet, tipped so's to keep it from running out of the broken side. The waiter said it was the only whole glass on board, grinning a ghastly grin at his own irony, as he explained that a heavy wave had burst in a window and dashed all the boat's glassware to the floor. The large rock-

ers had rocked over and lay on their backs, sick as death, I fancied. The side tables had pitched forward with their trays of pitchers and goblets, and were shoving around. (No decanters and wine glasses on *that* boat.) The stove was sliding hither and yon, while the pipe rolled back and forth for company.

As I lay with closed eyes I could feel myself go up and up on a high wave and then down, down, down—till it seemed we must be going to the bottom of the lake, and I didn't care if I did; had got quite beyond that.

Well, George, about ten o'clock there came a crash. It seemed to be against our side of the boat. The timbers creaked-shrieked, rather-from end to end with the strain. I was landed sprawling on the floor. The concussion had thrown me from my berth before I knew what was happening, and there I lay as limp as a rag and almost as senseless. Water began to flow around me, and my companion yelled that the boat was sinking and then disappeared. I didn't care if it were, and made no attempt to move. Soon my anxious uncle came hurrying in with the news that the boat was safely anchored in harbor, and that, just as predicted, it had been dashed against a pier, the waves sweeping completely over it the instant its onward course with them was impeded. Even over the high stern the mad waves had dashed, bursting in the door of the ladies' cabin, rushing its whole length and swashing the long carpet up and down with the rocking of the boat. The occupants were in various conditions of excitement, fainting and collapse.

Now, George, you must know that I've lived this horrid storm all over again, simply that an ignorant land-lubber, like yourself, may have a faint notion of what a storm at sea is like. Don't smirk—my uncle says any old sailor would rather encounter an ocean storm than one on a lake like Lake Erie. As compared with the latter, the ocean waves have a longer sweep, the alternate pitch of a vessel up and down is consequently less abrupt, the corresponding absence of commotion

on board involves less confusion and labor—whether it be caused by inanimate or animate matter—so that the chances for real discomfort and danger are all in favor of a lake storm.

Of my experiences in the city here I can mention but one. Directly back of uncle Roger's office, separated by an alley, is a large, sumptuous apartment on the third floor, where an exclusive set of gamblers nightly gather to ply their calling with mute lips and glittering, snaky eyes. Uncle says they are the very worst type of that class, because they assume, before the world, to be superior citizens, high toned and lofty.

Their windows reach the floor, and one very warm evening when the draperies were drawn aside, uncle Roger directed my notice to a white-haired man whose mania for the vice is so great that, night after night, he comes and takes the same seat to watch the others do what his palsied hands and failing intellect have unfitted him for taking part in. (Dismal to think of, isn't it?) At midnight these fellows have a supper in the same room, prepared by their own special cook—so that everything may be very choice, you know. Thereby hangs a wee tale.

One morning, I saw the cook set a steaming boiled ham in one of the low windows. Presently a large dog, belonging there, came sniffing around, and soon found it cool enough for his tongue. Well, George, that dog licked that juicy ham all over at least a dozen times; went away once, but soon returned for a few more rounds. By and by the cook came in, took up the ham and placed it in a closet in the far end of the room.

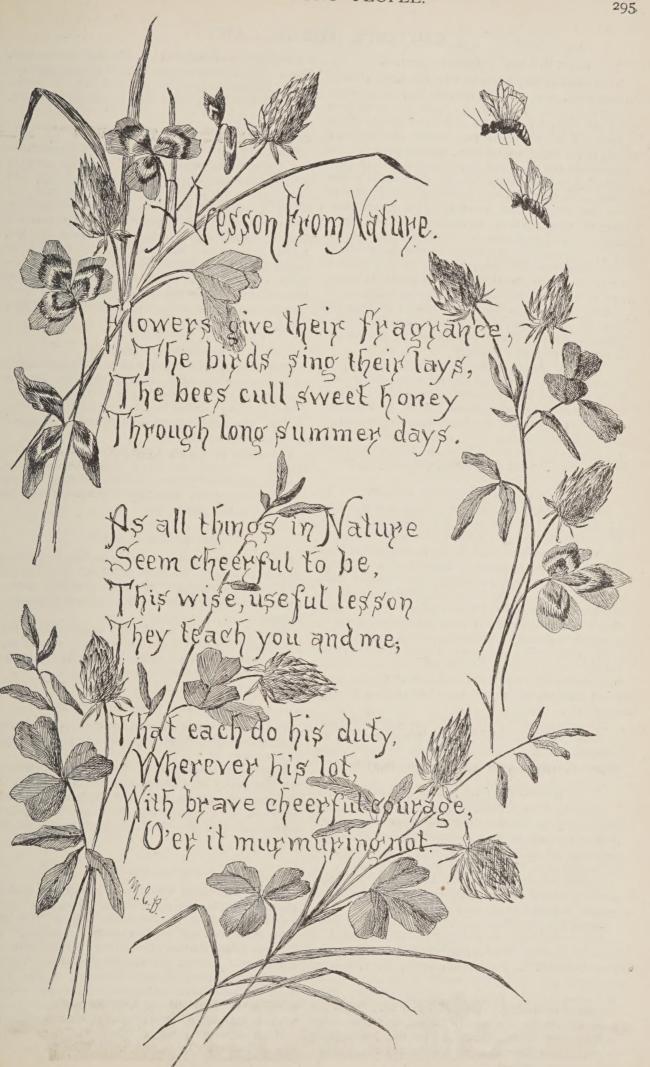
I enjoyed that dog's performance immensely, so did uncle Roger—probably as much as the feasters enjoyed their luscious ham that night.

Positively no more this time.

Yours, truly, ROGER JUNIOR. As Roger's letter is simply a bona fide statement of what he saw, heard and experienced, we'll make no disparaging comments, but trust that his short-hand facilities will enable us to hear from him again.

MARIA BARRETT BUTLER.





EDITOR'S MISCELLANY.

SANITARY AND ECONOMIC COOKING.

This volume, published by the American Health Association, is a valuable contribution to culinary literature, and gives both the scientific principles and the practical methods of good cooking. It is worthy of the attention and careful perusal and study of the good housekeeper who desires fully to understand the whys and the wherefores of preparing healthful food for the family. The work is one of the Lomb Prize Essays, and for which the sum of \$500 was offered, and secured by its author, Mrs. Mary Hinman Abel, in competition with sixty-nine others. The committee, of five ladies and gentlemen, who passed their judgment upon the merits of these seventy essays, say; "Whoever may read it can have confidence in the soundness of its teachings, and cannot fail to be instructed in the art of cooking by its plain precepts, founded as they are upon the correct application of the scientific principles of chemistry and physiology to the proper preparation of food for man."

The book claims to be particularly adapted to "persons of moderate and small means," but as a work which teaches the essential principles of cookery, we are sure there is not a home in the land which would not be better for its mistress' acquaintance with its contents. We cannot state the price, but it is merely nominal. It can be had of booksellers, or of Dr, Irving A. Watson, Concord, N. H.

NEW ENGLAND BREAKFAST BREADS.

This is the title of a handsome book, published by Lee & Shepard, of Boston, at the price of one dollar. The author is Lucia Gray Swett, who says: "Nearly all these recipes have been in one New England family several years, many of them half a century. There are only few exceptions, and these I have carefully tried. If the directions seem too explicit it is because I have tried to word the recipes so that they could be understood by a young housekeeper, or made by any one not experienced in cookery."

The book covers the whole subject of bread in its many forms, including luncheon and tea biscuits, fruit short-cakes and short-cakes of all kinds, rolls, gems, muffins, rusks, waffles, griddle cakes, Johnny cakes, &c.

The arrangement of the recipes is admirable, and we believe they are all so plain that not one can be misunderstood. The book, we believe, will rejoice many a houskeeper and give needful information.

DEPARTMENT OF AGRICULTURE.

From the United States Department of Agriculture have been received the Proceedings of the Third Annual Convention of the Association of American Agricultural Colleges and Experiment Stations, held at Washington, D. C., November, 1889, also,

Experiment Station Record, May, 1890. This last publication we do not receive regularly for some reason, but hope to do so in future.

Insect Life, Numbers 12 and 13, has been received, a double number. As usual, it is full of valuable matter. Among other things there is a communication from W. L. Devereaux, Clyde, N. Y. stating the larval life of the May beetle to be three years, and that he has noted for the last decade their abundant swarming in 1883, 1886 and 1889, believing these swarms to represent a brood, and that there are smaller broods that occupy the intervening years. The editor, in a note, does not think there is sufficient evidence of definite broods.

Contributions from the U. S. National Herbarium, No. 1. This consists of two lists of plants collected by Dr. Edward Palmer, in 1888 and 1889, in Southern California and Pacific coast islands and stations.

CONNECTICUT AGRICULTURE.

Report of the Connecticut Board of Agriculture and Experiment Stations, 1889. Under the cover of one large volume of eight hundred and sixty odd pages appear the several Reports for the past year of the Connecticut Board of Agriculture, the Connecticul Agricultural Experiment Station, and the Storr's School Agricultural Experiment Station. These Reports are all valuable, and will be the means of diffusing a great amount of useful and reliable information through the community. The Experiment Stations are certainly doing good work for the rural community, and as time passes they will be better appreciated generally.

ONTARIO ENTOMOLOGY.

Twentieth Annual Report of the Entomological Society of Ontario, 1889. It is a pleasure, year by year, to receive the annual visits of this publication, which is of high value both scientifically and practically. The following are some of the subjects having treatment in this issue:

The Apple Tree Tent Caterpillar, Cut-worms, the imported Currant Saw-fly, a New Clothes Beetle, Insects infesting Willows, Insects injurious to the Oak, Creatures that affect the Farmer through his Live Stock, Bee Moths, &c.

ELLWANGER & BARRY.

This well known nursery firm in announcing in their autumn catalogue, the death of Patrick Barry, one of its founders, state that "the business will be carried on, as in the past, under the firm name of Ellwanger & Barry."

Their patrons will be pleased to know that this grand establishment is to continue, and, we may say, of our own knowledge, there are worthy successors to maintain its excellent reputation.

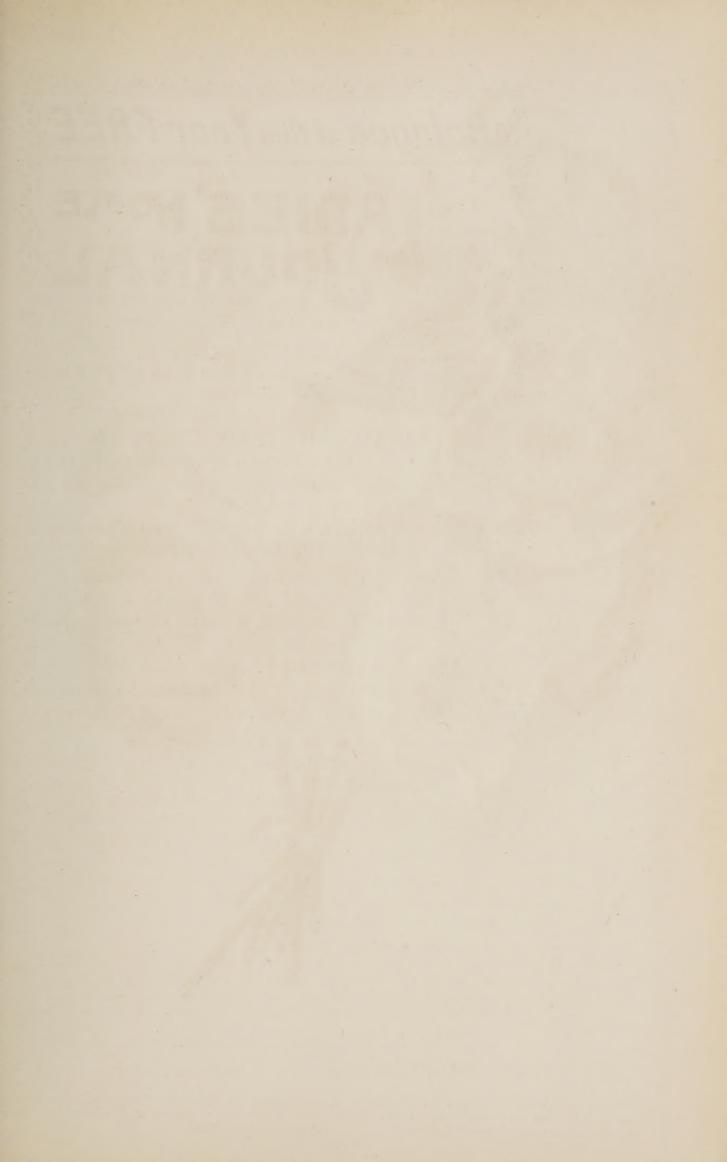
EXPERIMENT STATION REPORTS.

The Annual Report, Part 2, has been received from the Maine State College Agricultural Experimental Station, 1889.

Report of the Agricultural Experiment Stations of the University of California, with Descriptions of the Regions represented. By Professor Hilgard, Professor of Agriculture and Director of the Station. Being a part of the combined Reports of 1888 and 1889.

SPECIAL BULLETIN.

Special Bulletin of the Hatch Experiment Station of the Massachusetts Agricultural College has been received. This is an extended writing "On the most profitable use of Commercial Manures," by Professor Paul Wagner, Director of the Agricultural Experiment Station, Darmstadt, Germany. Translated by Professor Charles Wellington. A very valuable contribution to the subject treated, and worthy of being read, studied and kept for reference by all who are interested in the subject of special manures and commercial fertilizers. Copies of it can probably be procured by making application to the Station at Amherst, Mass.





PAPAVER NUDICAULE

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